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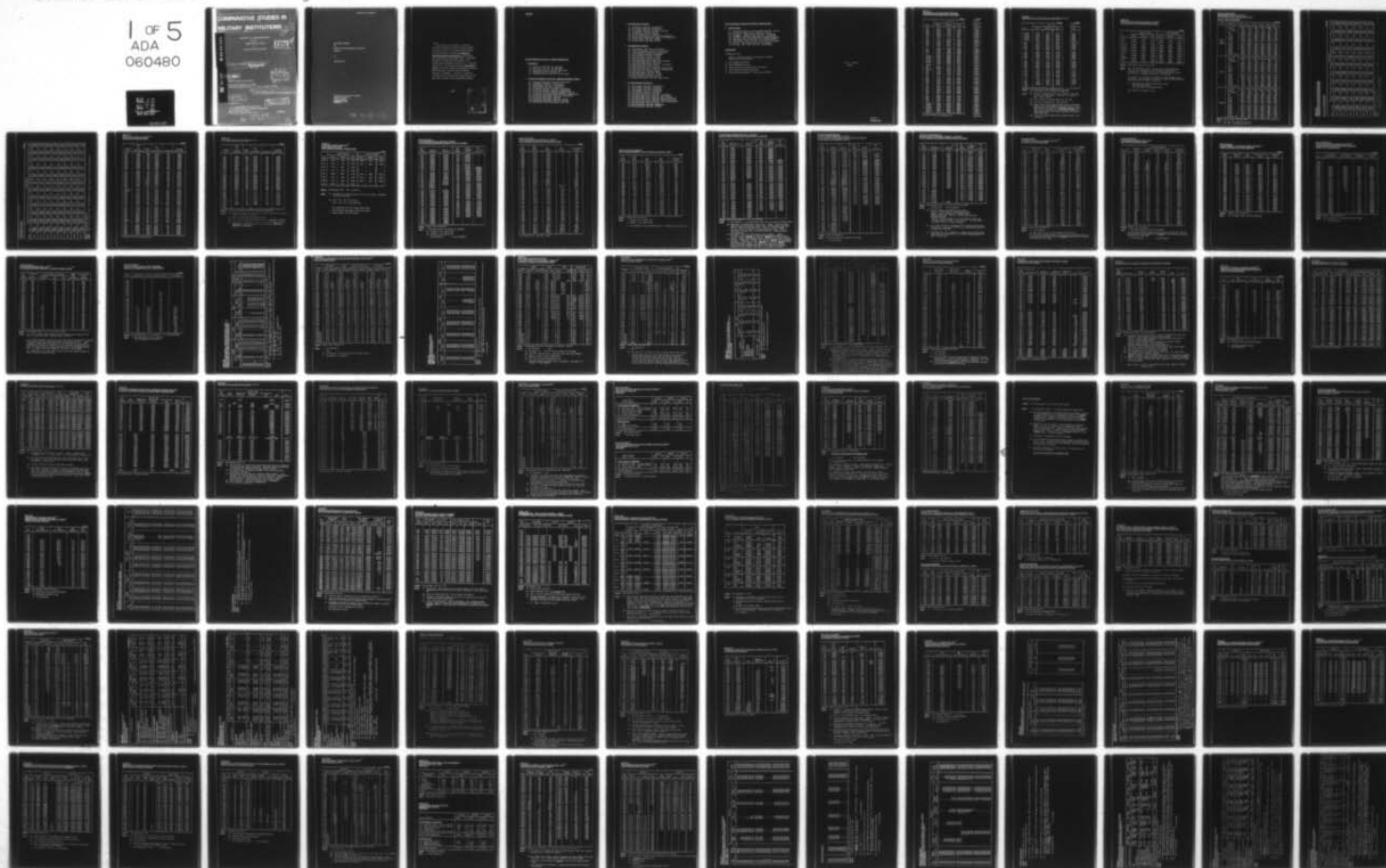
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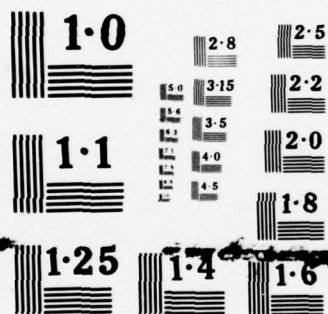
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# COMPARATIVE STUDIES IN MILITARY INSTITUTIONS. Part B

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for the  
COMPARATIVE STUDY  
of  
MILITARY INSTITUTIONS

LEVEL

Principal Investigator: <sup>10</sup> ~~Dr~~ Harries-Jenkins  
~~University of Hull~~  
ENGLAND  
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Gwyn

HISTORICAL ABSTRACT  
OF  
BRITISH MILITARY MANPOWER STATISTICS  
1900-75

by

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↙  
This Abstract is the first of a series of statistical compilations which are being prepared at ABERDEEN as part of an international exercise in data collection to facilitate Comparative Research on Military Institutions. The project, which originated in discussions within the Research Committee on Armed Forces and Society of the International Sociological Association, is under the direction of a Principal Investigator (Gwyn HARRIES-JENKINS, University of HULL) and guided by an Advisory Panel (Chairman: Professor Morris JANOWITZ, University of CHICAGO). The work is supported financially by the United States' Department of the Army under research contract DA-ERO-591-74-90014.

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Introductory Note

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C.R.M.I. (Misc.)

TABLES

Aberdeen  
October 1975

**Table 1:1**  
**The Population of the UK and GB 1900-1975**  
**Estimated Mid Year Population by Sex (000s)**

Year	(000s) U.K. (a)			(000s) G.B.
	Males	Females	Total	Total
1900	19957	21198	41155	36686
1901	20142	21396	41538	37091
1902	20318	21575	41893	37458
1903	20491	21756	42247	37829
1904	20672	21939	42611	38203
1905	20854	22127	42981	38582
1906	21039	22322	43361	38963
1907	21221	22516	43737	39349
1908	21410	22714	44124	39739
1909	21605	22915	44520	40133
1910	21796	23116	44912	40531
1911	21962	23306	45268	40887
1912	22052	23384	45436	41068
1913	22150	23498	45648	41302
1914	22353	23695	46048	41714
.....	.....	.....	.....	.....
1915(b)	22440	23900	46340	42062
1916(b)	22457	24057	46514	42241
1917(b)	22432	24182	46614	42341
1918(b)	22322	24253	46575	42295
1919(b)	22323	24211	46534	42182
.....	.....	.....	.....	.....
1920(b)	22479	24342	46821	42460
.....	.....	.....	.....	.....
1921	22655	24513	47168	42814
1922(c)	21226	23146	44372	43103
1923	21328	23268	44596	43337
1924	21508	23407	44915	43657
1925	21569	23496	45065	43802
1926	21662	23570	45232	43978
1927	21733	23656	45389	44139
1928	21823	23755	45578	44331
1929	21877	23795	45672	44432
1930	21986	23880	45866	44629
1931	22087	23987	46074	44831
1932	22235	24100	46335	45084
1933	22332	24188	46520	45262
1934	22403	24263	46666	45401
1935	22504	24365	46869	45598
1936	22605	24476	47081	45805
1937	22726	24563	47289	46008
1938	22822	24672	47494	46208
1939	22962	24800	47762	46467
.....	.....	.....	.....	.....
1940(d)	23304	24922	48226	46927
1941(d)	23266	24950	48216	46908
1942(d)	23336	25064	48400	47071
1943(d)	23574	25215	48789	47448
1944(d)	23672	25344	49016	47659
1945(d)	23723	25459	49182	47823

See end of table for footnotes etc.

Continued

**Table 1:1**  
**(Population of the UK and GB by Sex 1900-1975) Continued**

Year	(000s) U.K. (a)			(000s) G.B.
	Males	Females	Total	Total
1946(d)	23782	25435	49217	47867
1947(d)	23959	25561	49520	48170
1948(d)	24254	25760	50014	48652
1949(d)	24412	25900	50312	48941
1950(d)	24537	26028	50565	49188
	.....	.....	.....	.....
1951	24152	26138	50290	48917(e)
1952	24217	26214	50431	49056
1953	24317	26275	50592	49208
1954	24401	26364	50765	49378
1955	24510	26437	50947	49553
1956	24645	26539	51184	49787
1957	24779	26652	51431	50032
1958	24889	26762	51652	50250
1959	25044	26912	51956	50548
1960	25272	27100	52373	50952
1961	25525	27282	52807	51380
1962	25800	27473	53273	51838
1963	25944	27608	53552	52106
1964	26121	27765	53886	52428
1965	26276	27943	54219	52750
1966	26416	28087	54503	53025
1967	26576	28226	54802	53311
1968	26715	28333	55048	53546
1969	26825	28437	55262	53749
1970	26900	28518	55418	53894
1971	27000	28610	55610	54072
1972	27106	28687	55793	54248
1973	27186	28747	55933	54386
1974	27220	28749	55968	54421
1975				

**Source:** Bibliography items (33) 1900-1914 and 1921-1939  
 (31) 1915-1920, (34) 1940-1960 (17) 1961-1974.

- Notes:** (a) 1900-1921 inclusive UK = GB + All Ireland. From 1922  
 UK = GB + N.Ireland Only. (1920 GB + N. Ireland =  
 20881 22837 43718).
- (b) Total Population Estimate (See also note (d)).
- (c) UK = GB + N.Ireland only: see note (a).
- (d) These figures include all UK Armed Forces and Merchant  
 seamen at sea and exclude non UK Armed Forces in the UK.  
 They overstate the population resident in the UK. This  
 definition of population is called 'Total Population' in  
 most sources and the more usual residential definition  
 'Home Population'.
- (e) 'Total Population' (See note (d) above) for GB in 1951  
 was 49177.



Table 1:2

The Population of the U.K. and G.B. 1901-1971(a)  
Selected Years Males Females and Total (000s)

(000s)

Year	Great Britain			United Kingdom		
	Males	Females	Total	Males	Females	Total
1901	17903	19097	37000	30103	21350	41459
1911	19755	21076	40831	21947	23274	45221
1921(b)	20423	22346	42769	21042	22996	44038
1931(b)	21459	23336	44795	22060	23978	46038
1939(c)	22332	24135	46467	22962	24800	47762
1951(d)	23450	25404	48854	24118	26107	50225
1961	24787	26497	51284	25481	27228	52709
1966(c)	25320	26984	52304	26044	27745	53789
1971	26198	27781	53979	26953	28562	55515

Source: Bibliography Items (30) and (34)

Notes: (a) 1901 and 1911 UK = GB + All Ireland: Statistically from 1922 UK = GB + N.Ireland but here from 1921 (see note b). Estimates of 'N.Ireland' for 1901 and 1911 given in (34) are as follows 1901: 1237 590 647 and 1911: 1251 603 648.

(b) 1921, 1931 No census in N.Ireland. N.Ireland Figures used are Registrar Generals Mid Year Totals for 1922 and 1931 (N.Ireland Censi 1926, 1937 not shown. See (34)).

(c) 1939 Registrar General (30) Mid Year totals  
 1966 10% Sample Census.  
 All other years full decennial Censi.

(d) There was no census in 1941.

**Table 1:3 (Continued)**  
**The Population of the UK 1901-1971 \***  
**Selected Years by Sex and Age Group (000s)**

**Part II The United Kingdom**

		(000s)					
Sex	Age Group	1901	1911	1931	1951	1961	1971
Males and Females	All ages	38237	42082	46038	50225	<b>52709</b>	55515
	Under 1	938	915	712	773	893	891
	1 - Under 2	857	870	699	805	849	878
	2-4	2586	2731	2120	2748	2471	2736
	5-9	4106	4338	3897	3689	3815	4670
	10-14	3934	4114	3746	3310	4307	4213
	15-19	3826	3919	3988	3175	3695	3832
	20-24	3674	3702	4024	3393	3305	4237
	25-29	3308	3560	3841	3761	3258	3510
	30-34	2833	3320	3494	3515	3403	3259
	35-39	2494	3021	3195	3786	3680	3169
	40-44	2165	2582	3028	3824	3442	3331
	45-49	1837	2227	2901	3603	3658	3544
	50-54	1566	1863	2713	3209	3645	3273
	55-59	1236	1487	2366	2746	3313	3360
	60-64	1067	1187	1897	2422	2783	3206
	65 and over	1809	2247	3358	5468	6190	7306
Males	All ages	18492	20357	22060	24118	25481	26952
	Under 1	471	462	361	397	459	457
	1 - Under 2	429	438	353	412	436	451
	2-4	1290	1369	1070	1403	1266	1404
	5-9	2052	2170	1967	1885	1954	2395
	10-14	1972	2058	1892	1681	2206	2166
	15-19	1898	1948	1986	1564	1870	1961
	20-24	1737	1754	1958	1648	1641	2132
	25-29	1556	1680	1860	1861	1649	1822
	30-34	1349	1587	1636	1725	1706	1652
	35-39	1200	1459	1462	1856	1831	1598
	40-44	1048	1244	1397	1881	1689	1659
	45-49	886	1070	1347	1764	1790	1750
	50-54	747	893	1274	1495	1779	1591
	55-59	582	707	1132	1234	1589	1614
	60-64	490	555	894	1061	1239	1497
	65 and over	784	965	1472	2248	2378	2804
Females	All ages	19745	21725	23978	26107	27228	28562
	Under 1	466	453	351	376	434	434
	1 - Under 2	428	432	346	393	413	428
	2-4	1296	1362	1050	1342	1204	1332
	5-9	2054	2169	1930	1804	1862	2274
	10-14	1962	2056	1854	1629	2102	2047
	15-19	1928	1971	2002	1611	1825	1872
	20-24	1938	1948	2066	1744	1664	2105
	25-29	1752	1879	1981	1900	1610	1788
	30-34	1484	1733	1858	1790	1697	1607
	35-39	1294	1563	1733	1930	1850	1572
	40-44	1117	1338	1631	1944	1753	1672
	45-49	951	1156	1553	1839	1869	1794
	50-54	819	971	1439	1714	1866	1683
	55-59	654	780	1234	1512	1723	1746
	60-64	577	632	1003	1361	1544	1709
	65 and over	1025	1282	1947	3219	3811	4502

**Source:** Bibliography Item (27) 1974.

**Note:** \* UK = GB + All Ireland 1901, 1911.  
 UK = GB + N. Ireland for 1931 on.



**Table 1:3**  
**The Population of the UK and GB 1901-1971**  
**Selected Years by Sex and Age Group (000s)**

**Part I The United Kingdom**

Year	Sex	Population									
		Total	0-14	15-19	20-44	45-64	65+	15-19	20-24	25-34	15-34
1901	Male	20103	6708	2073	7457	2973	892	2073	1900	3140	7113
	Female	21356	6886	2102	8151	3291	1126	2102	2098	3468	7668
	Total	41459	13394	4175	15608	6264	2018	4175	3998	6608	14781
1911	Male	21947	6984	2103	8292	3468	1120	2103	1896	3496	7495
	Female	23274	6924	2119	8996	3778	1457	2119	2075	3778	7972
	Total	45221	13888	4222	17288	7246	2577	4222	3971	7274	15467
1951	Male	24118	5782	1563	8970	5554	2249	1563	1648	3586	6797
	Female	26107	5544	1611	9308	6425	3219	1611	1745	3689	7045
	Total	50225	11326	3174	18278	11979	5468	3174	3393	7275	13842
1961	Male	25481	6321	1870	8515	6398	2377	1870	1641	3354	6865
	Female	27228	6015	1825	8574	7002	3812	1825	1664	3308	6797
	Total	52709	12336	3695	17089	13400	6189	3695	3305	6662	13662
1966	Male	26044	6467	2148	8480	6433	2516	2148	1787	3240	7175
	Female	27745	6146	2079	8479	6963	4078	2079	1788	3188	7055
	Total	53789	12613	4227	16959	13396	6594	4227	3575	6428	14230
1971	Male	26953	6873	1961	8863	6452	2804	1961	2132	3474	7567
	Female	28562	6517	1871	8742	6932	4500	1871	2105	3395	7371
	Total	55515	13390	3832	17605	13384	7304	3832	4237	6869	14938

**Source:** Bibliography Items (30).

**Notes:** There was no Census in 1941. There was no N.Ireland Census in 1921 or 1931. The 1966 Census was a Sample Census.  
 In 1901 and 1911 UK = GB + All Ireland.  
 For further details see Table 1.3 Part II

# Part III Great Britain

(000s)

Year	Sex	Population										
		Total	0-14	15-19	20-44	45-64	65+	15-19	20-24	25-29	30-34	15-34
1901	Male	17903	6021	1838	6685	2610	749	1838	1683	1510	1309	6340
	Female	19097	6020	1864	7339	2889	985	1864	1871	1694	1438	6867
	Total	37000	12041	3702	14024	5499	1734	3702	3554	3204	2747	13207
1911	Male	19755	6304	1888	7516	3132	915	1888	1704	1638	1546	6776
	Female	21076	6283	1911	8223	3437	1222	1911	1891	1827	1687	7316
	Total	40831	12587	3799	15739	6569	2137	3799	3595	3465	3233	14092
1921	Male	20423	6010	1967	7393	3950	1103	1967	1651	1513	1436	6567
	Female	22346	5930	2014	8642	4280	1480	2014	1929	1824	1703	7470
	Total	42769	11940	3981	16035	8230	2583	3981	3580	3337	3139	14037
1931	Male	21459	5466	1929	8107	4526	1431	1919	1905	1815	1596	7245
	Female	23336	5359	1945	9035	5112	1885	1945	2011	1931	1809	7696
	Total	44795	10825	3874	17142	9638	3316	3874	3916	3746	3405	14941
1951	Male	23450	5588	1508	8741	5426	2187	1508	1600	1813	1680	6601
	Female	25404	5359	1558	9062	6279	3146	1558	1692	1848	1743	6841
	Total	48854	10947	3066	17803	11705	5333	3066	3292	3661	3423	13442
1961	Male	24787	6109	1809	8299	5252	2318	1809	1594	1607	1664	6674
	Female	26497	5814	1766	8349	6841	3727	1766	1617	1566	1653	6602
	Total	51284	11923	3575	16648	13093	6045	3575	3211	3173	3317	13276
1966	Male	25320	6241	2084	8259	5284	2452	2084	1735	1594	1561	6974
	Female	26984	5933	2017	8249	6798	3984	2017	1734	1559	1542	6852
	Total	52304	12174	4101	16508	13083	6438	4101	3469	3153	3103	13826
1971	Male	26198	6638	1896	8627	6301	2736	1896	2073	1771	1608	7348
	Female	27781	6293	1810	8508	6766	4404	1810	2049	1737	1564	7160
	Total	53979	12931	3706	17135	13067	7140	3706	4122	3508	3172	14508

Source: Bibliography Item (30)

Notes: There was no census in 1941. 1966 Census was a sample census, all other years full cens.

Table 1:4

UN Working Population 1900-1975 (a)  
Employed and Unemployed (000s)

(000s)

Calendar Year	Total in Civil Employment	Armed Forces	Total in Employment	Unemployed	Working Population
1900	17530	490	18020	450	18470
1901	17550	530	18080	600	18680
1902	17610	500	18110	730	18840
1903	17720	420	18140	870	19010
1904	17640	410	18050	1130	19180
1905	18000	400	18400	950	19350
1906	18440	390	18830	690	19520
1907	18600	380	18980	710	19690
1908	17960	380	18340	1520	19860
1909	18140	390	18530	1510	20040
1910	18890	390	19280	930	20210
1911	19390	400	19790	600	20390
1912	19490	400	19890	670	20560
1913	19910	400	20310	430	20740
1914	19440	810	20250	660	20910
1915	18400	2490	20890	200	21090
1916	17700	3500	21200	70	21270
1917	17100	4250	21350	100	21450
1918	17060	4430	21490	140	21630
1919	19030	2130	21160	660	21820
1920(b)	19537	760	20297	391	20688
1921(c)	17417	491	17908	2212	20120
1922	17483	392	17875	1909	19784
1923	17758	348	18106	1567	19673
1924	18032	346	18378	1404	19782
1925	18238	350	18588	1559	20147
1926	18244	349	18593	1759	20352
1927	18789	347	19136	1373	20509
1928	18868	336	19204	1536	20740
1929	19146	333	19479	1503	20982
1930	18788	327	19115	2379	21494
1931	18340	325	18665	3252	21917
1932	18430	323	18753	3400	22153
1933	18813	323	19136	3087	22223
1934	19360	325	19685	2609	22294
1935	19704	333	20037	2437	22474
1936	20321	349	20670	2100	22770
1937	20987	377	21364	1776	23140
1938(c)	20986	432	21418	2164	23582
1939	21800	480	22300	1340	23600
1940	20800	2270	23100	710	23800
1941	20600	3380	24000	250	24200
1942	20700	4090	24800	110	24900
1943	20200	4780	25000	80	25100
1944	19700	4990	24700	70	24800
1945	19100	5130	24200	100	24300

See end of table for footnotes etc.



Table 1.4

(UK Working Population 1900-1975) Continued

(000s)

Calendar Year	Total in Civil Employment	Armed Forces	Total in Employment	Unemployed	Working Population
1946	20300	2730	23000	400	23400
1947	21600	1460	23100	300	23400
1948	22124	940	23064	300	23364
1949	22300	790	23090	270	23360
1950	22582	721	23303	307	23610
1951	22751	838	23589	253	23842
1952	22677	878	23555	370	23925
1953	22841	868	23709	342	24051
1954	23216	844	24060	285	24345
1955	23542	805	24347	235	24582
1956	23736	775	24511	256	24767
1957	23775	693	24468	319	24787
1958	23609	613	24222	453	24675
1959	23836	562	24398	457	24855
1960	24308	515	24823	359	25182
1961	24607	469	25076	338	25414
1962	24734	439	25173	471	25644
1963	24785	426	25211	540	25751
1964	25115	424	25539	384	25923
1965	25342	422	25764	338	26102
1966	25382	417	25799	368	26167
1967	25044	415	25459	557	26016
1968	24910	398	25308	575	25883
1969	24895	379	25274	575	25849
1970	24736	372	25108	612	25720
1971 (d)	24073	369	24442	807	25249
1972	24088	372	24460	862	25322
1973	24669	360	25029	596	25625
1974					
1975					

Source: Bibliography Items (29) 1900-1965 and (28) 1966-1973.

Notes: (a) Annual Averages; For details of coverage, especially in earlier years, see source references.

(b) UK = GB + N.Ireland only from 1920 on.

(c) 1921 - 1938 'Unemployed' includes persons temporarily stopped.

(d) In 1971 changes (which materially affected the 'Total in Civil Employment' figures) were made in the method of estimating Employees in Employment.

**Table 1:5**  
**UK and G.B. Working Population<sup>(a)</sup>**  
**Census Years 1901 - 1971**  
**Males, Females and Males + Females (OOOs)**

Year	Great Britain			United Kingdom <sup>(b)</sup>		
	Males	Females	Total	Males	Females	Total
1901	11548	4763	16312	12962	5313	18275
1911	12927	5424	18351	14315	5854	20169
1921	13370	5637	19007	-	-	-
1931	13118	5790	18908	-	-	-
1951	15309	6826	22135	15730	7008	22738
1961	15704	7582	23287	16119	7769	23889
1966*	16023	8868	24892	16439	9064	25503
1971	15884	9138	25021	..	..	..

**Source:** Bibliography Item (30) (Various).

**Notes:** (a) Economically Active Population, in and out of work, as defined for each census year.

(b) 1901, 1911 = GB + All Ireland.  
 1951 - 1971 = GB + N.Ireland Only.

- Not Applicable (No Irish Census these years).

.. Not Available (There was a census this year).

\* Sample Census, not full census.

Table 2:1 Part I

UK Tri-Service Manpower 1899/1900 - 1974/75

Actual Strengths and Maximum Allowable (Vote A) Strengths\*

Fin. Year Ending	Actual Strength (a)	Vote A Maximum (b)	Fin. Year Ending	Actual Strength Cont'd	Vote A Cont'd (b)
1900	379000	524000	1940	539000	-
1901	531000	618300	1941	2281000	-
1902	535000	642100	1942	3396000	-
1903	490000	616800	1943	4127000	-
1904	428000	437300	1944	4797000	-
1905	428000	432800	1945	5011000	-
1906	409000	425300	1946	5138000	-
1907	401000	408100	1947	3033000	4267800
1908	387000	394000	1948	1512000	1784000
1909	384000	389200	1949	1065000	1342300
1910	387000	387200	1950	896000	958000
1911	389000	391100	1951	890000	908000
1912	392000	396300	1952	932000	961000
1913	394000	400000	1953	958000	1023000
1914	395000	407500	1954	957000	1007000
1915	1315000	2512300	1955	922000	976000
1916	2770000	3350000	1956	874000	928000
1917	3676000	5350000	1957	811000	870000
1918	4226000	..	1958	723000	804500
1919	3859000	..	1959	642000	701000
1920	1419000	3025000	1960	588000	637000
1921	614000	690700	1961	542000	593000
1922	503000	830600	1962	505000	547000
1923	378000	438900	1963	476000	506000
1924	348000	375800	1964	461000	489000
1925	347000	359400	1965	456000	472000
1926	351000	361800	1966	453000	477800
1927	347000	359600	1967	450000	472700
1928	345000	362400	1968	440000	465500
1929	336000	348300	1969	416000	447500
1930	330000	342800	1970	397000	423500
1931	320000	338400	1971	388000	407000
1932	321000	334800	1972	385000	396400
1933	318000	331100	1973	381000	396500
1934	319000	329000	1974	367000	392500
1935	322000	331400	1975	349000	375000
1936	332000	350100			
1937	348000	373000			
1938	366000	408800			
1939	409000	534200			

Source: Tables 2:2, 2:3 and 2:4

Notes: \* See Source Tables for details of Coverage.

(a) Rounded to the nearest 1000.

(b) Rounded to the nearest 100.

- Not Applicable.

.. Not Available.



Table 2:1 Part II

UK Tri-Service Manpower 1899/1900 - 1974/75

Actual Strength, by Service and Tri-Service (000s)

Fin. Year Ending	000s			
	Royal Navy Total*	Army Total*	RAF Total*	Tri-Service Total*
1900	108.6	270.8	-	379
1901	112.4	418.5	-	531
1902	117.1	417.5	-	535
1903	121.9	367.9	-	490
1904	125.9	302.5	-	428
1905	130.5	297.7	-	428
1906	127.7	281.5	-	409
1907	127.4	273.5	-	401
1908	127.2	259.5	-	387
1909	126.9	256.9	-	384
1910	128.0	258.6	-	387
1911	130.8	258.3	-	389
1912	132.8	259.0	-	392
1913	136.4	258.0	-	394
1914	143.0	251.7	-	395
1915	199.5	1115.5	-	1315
1916	297.0	2472.9	-	2770
1917	349.6	3326.5	-	3676
1918	407.0	3819.5	-	4226
1919	381.3	3477.6	(291.7)	3859
1920	176.1	1164.6	77.9	1419
1921	124.0	465.0	24.9	614
1922	127.2	348.6	27.3	503
1923	107.8	241.6	28.3	378
1924	99.1	220.6	28.5	348
1925	99.5	216.7	30.3	347
1926	100.3	219.4	31.7	351
1927	100.8	215.4	30.6	347
1928	101.9	215.2	28.1	345
1929	100.7	206.2	28.9	336
1930	99.3	201.1	29.2	330
1931	94.9	195.0	30.0	320
1932	92.4	198.6	30.3	321
1933	89.7	198.7	29.5	318
1934	89.9	200.7	28.5	319
1935	91.4	201.8	28.8	322
1936	94.3	202.1	35.9	332
1937	99.9	199.6	48.6	348
1938	107.0	198.3	60.4	366
1939	120.0	205.9	83.0	409
1940	161.0	258.0	120.0	539
1941	282.0	1695.0	303.8	2281
1942	421.0	2272.4	702.8	3396
1943	536.6	2624.1	966.5	4127
1944	726.6	2915.1	1155.5	4797
1945	868.3	2956.0	1187.1	5011

For footnotes etc. See end of Table.

Table 2:1 Part II Continued

(UK Tri-Service Manpower: Actual Strength, by Service: 000s)

000s

Fin. Year Ending	Royal Navy Total	Army Total	RAF Total	Tri-Service Total
1946	866.0	3154.5	1117.0	5138
1947	373.2	2122.9	537.1	3033
1948	197.8	986.1	328.1	1512
1949	144.8	646.4	273.6	1065
1950	141.9	511.6	242.1	896
1951	138.8	510.6	241.0	890
1952	141.7	530.0	260.5	932
1953	145.4	529.2	283.9	958
1954	139.7	536.2	281.3	957
1955	131.1	521.9	269.4	922
1956	125.3	491.4	257.2	874
1957	119.1	450.9	241.2	811
1958	111.3	397.8	214.3	723
1959	103.8	352.0	185.9	642
1960	98.2	318.0	171.8	588
1961	94.8	283.3	163.9	542
1962	95.1	254.0	156.0	505
1963	95.8	231.4	148.5	476
1964	96.7	223.2	141.4	461
1965	97.6	223.2	134.9	456
1966	98.2	224.0	130.3	453
1967	97.4	225.5	126.8	450
1968	96.0	220.5	123.5	440
1969	92.6	205.5	118.2	416
1970	87.2	195.2	114.6	397
1971	84.3	190.5	113.7	388
1972	82.5	189.7	112.4	385
1973	81.2	190.5	109.2	381
1974	79.8	184.0	103.2	367
1975	78.8	173.0	97.5	349

Source: Tables 2:2, 2:3 and 2:4.Notes: \* Rounded to the nearest 100.

+ Rounded to the nearest 1000.

( ) Not included in the Tri-Service Total: See Table 2:4 footnote (c).

UK Royal Navy Strengths 1899/1900 - 1974/1975  
Actual Strengths and Maximum allowable (Vote A) Strengths

Fin. Year Ending	Actual Strength (a,b,c)	Vote A <sup>(b,c)</sup> (Maximum)	Fin. Year Ending	Actual Strength Cont'd.	Vote A Cont'd.
1900	108595	110640	1940	161000	-
1901	112429	114800	1941	282000	-
1902	117116	118625	1942	421000	-
1903	121870	122500	1943	536600	-
1904	125948	127100	1944	726600	-
1905	130490	131100	1945	868300	-
1906	127667	129000	1946	866000	-
1907	127431	129000	1947	373200	492800
1908	127228	128000	1948	197800	204000
1909	126935	128000	1949	144750	167300
1910	127968	128000	1950	141900	153000
1911	130817	131000	1951	138750	143000
1912	132792	134000	1952	141700	149000
1913	136443	137500	1953	145400	153000
1914	142960	146000	1954	139700	151000
1915	199451	250000	1955	131100	139000
1916	297008	350000	1956	125250	133000
1917	349578	350000	1957	119050	128000
1918	406977	..	1958	111300	121500
1919	381311	..	1959	103800	112000
1920	176087	275000	1960	98150	106000
1921	124009	136000	1961	94800	102000
1922	127180	148700	1962	95050	100000
1923	107782	121400	1963	95800	100000
1924	99107	100923	1964	96700	100000
1925	99453	100787	1965	97600	103000
1926	100284	103025	1966	98200	104000
1927	100791	103125	1967	97400	103000
1928	101916	102725	1968	96000	100500
1929	100680	102250	1969	92600	98000
1930	99300	100300	1970	87150	95500
1931	94921	97550	1971	84300	90000
1932	92449	94200	1972	82450	87000
1933	89667	92275	1973	81235	85000
1934	89863	91165	1974	79750	84000
1935	91351	93222	1975	78600	82500
1936	94259	95370			
1937	99886	102046			
1938	107040	112895			
1939	120000	147413			

Source: Bibliography Items (1) (3) (10) and (27)

Notes: .. Not Available - Not Applicable (There was no set max. for these years).

- (a) 1899-1900 - 1937-38 Monthly Average April - March: 1938-39 Estimate based on March 1938 and June 1939 Actuals: 1939-40 Actual Aug. 1939: 1940-41 - 1947-48 30th June Actuals: 1948-49 - 1973-74 Average of 1st April Actuals current and following Financial Years. (e.g. 1948-1949 = 1st April 1948 + 1st April 1949 ÷ 2). (1958-59, 1959-60 part estimates).
- (b) 1899-1900 - 1921-22 No Royal Marine Police Category: 1922-23 - 1937-38 'Actuals' exclude but 'Vote A's' include Royal Marine Police. 1938-39 - 1946-47 both include Police. 1947-48 on, no Police category.
- (c) 1939-40 - 1946-47 Both 'Actuals' and 'Vote A's' include Locally Enlisted Personnel. 1947-48 on, 'Actuals' exclude but 'Vote A's' include Locally Enlisted Personnel (LEPs). Pre 1939-40 the position is unclear. Either there were insignificant LEPs or else they were (probably) included in both 'Actuals' and 'Vote A' as a matter of course.



Table 2:3 (Also Table 4:1)

UK Army Strengths 1899/1900 - 1974/75

Actual Strengths and Maximum Allowable (Vote A) Strengths

UK and Indian Establishments together

Fin. Year Ending	Actual Strength	Vote A Maximum	Fin. Year Ending	Actual Strength	Vote A Maximum
1900	270820	413370	1946	3154500	-
1901	418472	503484	1947	2122870	3015000
1902	417520	523518	1948	986140	1210000
1903	367940	494328	1949	646420	850000
1904	302540	310211	1950	511630	550000
1905	297720	301657	1951	510550	522000
1906	281490	296308	1952	530020	527000
1907	273490	279131	1953	529200	555000
1908	259510	265967	1954	536150	554000
1909	256940	261155	1955	521880	549000
1910	258550	259209	1956	491430	523000
1911	258250	260084	1957	450870	485000
1912	259040	262284	1958	397800	443000
1913	258000	262486	1959	351950	386000
1914	251700	261497	1960	318000	351000
1915	1115500	2262296	1961	283330	317000
1916	2472900	3000000	1962	254010	283000
1917	3326500	5000000	1963	231440	252000
1918	3819500	5000000	1964	223200	241000
1919	3477600	5000000	1965	223200	229000
1920	1164600	2600000	1966	224000	237800
1921	464970	525000	1967	225500	238700
1922	348620	641000	1968	220500	237000
1923	241600	286357	1969	205520	224500
1924	220600	241909	1970	195220	210000
1925	216730	223564	1971	190500	201600
1926	219380	222779	1972	189700	195500
1927	215370	220943	1973	190500	198000
1928	215200	226723	1974	184000	198500
1929	206160	213544	1975	173000	188500
1930	201080	210487			
1931	194970	208815			
1932	198570	208573			
1933	198740	206811			
1934	200710	206793			
1935	201800	207165			
1936	202140	209754			
1937	199570	215924			
1938	198340	215945			
1939	205880	284806			
1940	258000	-			
1941	1695000	-			
1942	2272400	-			
1943	2624100	-			
1944	2915100	-			
1945	2956000	-			

Source: Tables 4:2 and 4:3

Notes: See Source Tables for details of coverage.

- Not Applicable.

Table 2:4 (Also Table 5:1)

UK Royal Air Force Strengths 1918-1919 - 1974-1975

Actual Strengths and Maximum Allowable (Vote A) Strengths

Fin. Year Ending	Actual Strength (a,b)	Vote A (b,c) (Maximum)	Fin. Year Ending	Actual Strength Cont'd.	Vote A Cont'd.
1919	291748	1000	1948	327985	370000
1920	77880	150000	1949	273635	325000
1921	24866	29730	1950	242110	255000
1922	27345	40880	1951	<del>241000</del>	243000
1923	28304	31176	1952	260500	285000
1924	28460	33000	1953	283850	315000
1925	30327	35000	1954	281260	302000
1926	31692	36000	1955	269443	288000
1927	30640	35500	1956	257190	272000
1928	28139	33000	1957	241203	257000
1929	28888	32500	1958	214315	240000
1930	29240	32000	1959	185931	203000
1931	29981	32000	1960	171824	180000
1932	30263	32000	1961	163918	174000
1933	29520	32000	1962	156033	164000
1934	28470	31000	1963	148457	154000
1935	28780	31000	1964	141404	148000
1936	35942	45000	1965	134920	140000
1937	48583	55000	1966	130340	136000
1938	60370	70000	1967	126807	131000
1939	83035	102000	1968	123471	128000
1940	120000	-	1969	118228	125000
1941	303800	-	1970	114558	118000
1942	702800	-	1971	113674	115400
1943	966500	-	1972	112365	113900
1944	1155500	-	1973	109241	113500
1945	1187100	-	1974	103225	110000
1946	1117000	-	1975	97500	104000
1947	537060	760000			

Source: Bibliography Items: (1), (3), (8), (10) and (22)

Notes: .. Not Available - Not Applicable.

- (a) 1918-19, October 1918 (See also note (c)).  
 1919-20 - 1937-38, Monthly Average April-March.  
 1938-39 Average of March 1938 and March 1939.  
 1939-40 August 1939. 1940-41 - 1945-46 June each year  
 (Including Nurses).  
 1946-47 - 1974-75 Average of 1st April Actuals current and  
 following financial years. (e.g. 1946-47 = 1st April 1946 +  
 1st April 1947 ÷ 2) 1974-75, Estimate.
- (b) All serving personnel (including Locally enlisted overseas) are  
 covered and, in the case of Vote As, all supplementary estimates  
 of numbers are included.
- (c) 1918-1919 Vote A was a token vote. Numbers were actually borne  
 under Army Votes for this year; the Actual Strength quoted was  
 borne on Army votes.

**Table 2:5 Part I**  
**Tri-Service Personnel: Strengths 1935-1975<sup>(a)</sup>**  
**By Service, All Personnel (000s)**

(000s)				
Year	Royal Navy Total	Army Total	Royal Air Force Total	Tri-Service Total (b)
1935	92.8	204.3	32.1	329.2
1936	98.2	201.1	45.8	345.1
1937	102.8	197.7	56.2	356.7
1938	112.7	200.0	69.5	382.2
1939	129.1	258.0	112.5	499.6
1940	282.0	1695.0	303.8	2280.8
1941	421.0	2272.4	702.8	3396.2
1942	536.6	2619.1	966.5	4122.2
1943	726.6	2915.1	1155.5	4797.2
1944	867.3	2956.0	1187.1	5010.4
1945	866.0	3136.5	1117.0	5119.5
1946	373.2	1195.6	486.0	2054.8
1947	197.8	805.9	307.5	1311.2
1948	143.0	468.8	238.0	849.8
1949	144.0	406.0	219.9	769.9
1950	135.3	361.3	197.1	693.7
1951	141.2	434.4	251.2	826.8
1952	146.3	453.1	272.6	872.0
1953	143.1	444.3	278.2	865.6
1954	132.6	445.3	261.0	838.9
1955	126.6	423.3	253.0	802.9
1956	120.0	399.4	242.0	761.4
1957	113.8	367.1	221.1	702.0
1958	105.4	323.9	184.9	614.2
1959	100.3	293.6	171.3	565.2
1960	96.8	257.9	163.8	518.5
1961	94.6	223.6	155.6	473.8
1962	93.9	199.7	148.3	441.9
1963	96.2	187.8	142.0	426.0
1964	97.8	192.0	133.6	423.4
1965	98.2	193.8	130.1	422.1
1966	97.2	193.8	125.9	416.9
1967	96.7	195.3	123.4	415.4
1968	93.5	187.0	118.5	399.0
1969	89.5	177.5	114.0	381.0
1970	85.5	174.5	112.5	372.5
1971	82.5	174.5	112.0	369.0
1972	81.5	179.0	111.0	371.5
1973	80.5	180.0	105.5	366.0
1974	78.6	171.8	99.0	349.4
1975	77.6	166.7	96.0	340.3

**Source:** Tables 3:2, 4:4 and 5:2.

**Notes:** .. Not Available.

(a) For extent of coverage see Source Table footnotes.

(b) This total differs slightly from that given in Table 2:1 (Part 1) mainly because the source used here excludes Locally Enlisted Personnel (See Table 2:7) from 1948.



**Table 2:5 Part II**  
**UK Tri-Service Manpower 1935 - 1975\***  
**Males Females and Nurses (000s)**

Year (a)	Tri-Service Males	Tri-Service Females			Tri-Service Total(a)
		Women	Nurses	Total	
1935	328.0	-	1.2	1.2	329.2
1936	343.9	-	1.2	1.2	345.1
1947	355.5	-	1.2	1.2	356.7
1938	381.0	-	1.2	1.2	382.2
1939	482.3	16.3	1.4	17.3	499.6
1940	2223.9	49.0	7.9	56.9	2280.8
1941	3291.0	95.3	9.9	105.2	3396.2
1942	3814.6	294.5	13.1	307.6	4122.2
1943	4335.3	445.4	16.5	461.9	4797.2
1944	4543.8	446.9	19.7	466.6	5010.4
1945	4682.3	415.8	21.4	437.2	5119.5
1946	1917.4	127.3	10.1	137.4	2054.8
1947	1247.6	59.4	4.2	63.6	1311.2
1948	810.5	36.6	2.7	39.3	849.8
1949	737.4	30.7	1.8	32.5	769.9
1950	670.1	21.9	1.7	23.6	693.7
1951	804.0	20.4	2.4	22.8	826.8
1952	848.4	20.9	2.7	23.6	872.0
1953	841.7	20.9	3.0	23.9	865.6
1954	811.1	19.9	2.9	22.8	839.9
1955	783.5	16.7	2.7	19.4	802.9
1956	745.2	13.6	2.6	16.2	761.4
1957	687.0	12.5	2.5	15.0	702.0
1958	600.1	11.7	2.4	14.1	614.2
1959	550.0	12.8	2.4	15.2	565.2
1960	503.3	13.0	2.2	15.2	518.5
1961	458.4	13.2	2.2	15.4	473.8
1962	424.7	15.0	2.2	17.2	441.9
1963	408.8	14.7	2.5	17.2	426.0
1964	407.5	13.3	2.6	15.9	423.4
1965	406.5	12.9	2.7	15.6	422.1
1966	401.6	12.6	2.7	15.3	416.9
1967	399.7	13.1	2.6	15.7	415.4
1968	384	12.5	2.6	15.1	399.0
1969	367	11.5	2.5	14.0	381.0
1970	358	11.4	2.7	14.1	372.5
1971	354	12.1	2.8	14.9	369.0
1972	356	12.7	2.8	15.5	371.5
1973	351	12.0	2.8	14.8	366.0
1974	335	..	..	14.4	349.4
1975	326	..	..	14.3	340.3

**Source:** Tables 3:2, 4:4 and 5:2

**Notes:** \* See Source Tables for Notes on Contents.

(a) This total differs slightly from that given in Table 2:1 (Part 1). mainly because the source used here excludes Locally Enlisted Personnel (see Table 2:7) from 1948

- Not Applicable.

.. Not Available.

Table 2:6 Part I

UK Armed Forces: Tri-Service Strength 1948-1975(a)  
 (000s) By Service at 1st April Each Year

(000s)

Calendar Year	Royal Navy Total	Army Total	Royal Air Force Total	Tri-Service Total
1946				
1947				
1948				
1949	144.5	415.7	224.9	785.1
1950	139.3	375.7	202.1	717.1
1951	138.2	433.2	237.8	809.2
1952	145.2	446.7	270.8	862.7
1953	145.6	448.4	277.1	871.1
1954	133.8	446.9	265.1	845.8
1955	128.4	437.0	258.2	823.6
1956	122.1	408.0	242.6	772.7
1957	116.0	375.2	227.9	719.1
1958	106.6	328.4	191.0	626.0
1959	101.6	303.9	173.2	578.7
1960	97.8	264.3	163.5	525.6
1961	95.3	231.3	158.2	484.8
1962	94.3	202.9	148.9	446.1
1963	95.8	190.6	143.8	430.2
1964	97.6	189.4	136.1	423.1
1965	98.6	193.7	135.3	427.6
1966	97.8	193.6	127.0	418.4
1967	97.0	196.2	124.1	417.3
1968	95.1	189.4	120.5	405.0
1969	90.2	178.5	114.2	382.9
1970	86.1	173.9	113.0	373.0
1971	82.5	173.4	112.1	368.0
1972	82.4	178.3	110.8	371.5
1973	81.2	179.9	105.9	367.0
1974	78.3	171.7	99.3	349.3
1975	78.0	166.5	95.6	340.1

Source: Tables 3:4, 4:6 and 5:5.

Note: (a) Excludes locally enlisted Personnel.

Table 2:6 Part II  
Tri Service Personnel, Strengths 1948-1975<sup>(a)</sup>  
By Male Regulars, National Servicemen and Females  
(000s) at 1st April each year

(000s)				
Year	Tri-Service (Male Regulars)	Tri-Service (Nat. Service)	Tri-Service (Females)	Tri-Service Total
1946				
1947				
1948				
1949	415.4	335.1	34.6	785.1
1950	421.3	269.2	26.6	717.1
1951	467.2	319.6	22.4	809.2
1952	521.8	317.7	23.2	862.7
1953	533.9	312.8	24.4	871.1
1954	524.4	298.3	23.1	845.8
1955	518.1	284.9	20.6	823.6
1956	467.2	289.0	16.5	772.7
1957	451.2	252.6	15.3	719.1
1958	416.5	195.6	13.9	626.0
1959	411.0	153.2	14.5	578.7
1960	393.3	117.1	15.2	525.6
1961	391.0	78.3	15.5	484.8
1962	398.1	31.2	16.8	446.1
1963	410.0	2.6	17.6	430.2
1964	407.0	-	16.1	423.1
1965	411.9	-	15.7	427.6
1966	402.9	-	15.5	418.4
1967	401.4	-	15.9	417.3
1968	389.6	-	15.4	405.0
1969	368.8	-	14.1	382.9
1970	358.8	-	14.2	373.0
1971	353.3	-	14.7	368.0
1972	356.1	-	15.4	371.5
1973	352.0	-	15.0	367.0
1974	334.9	-	14.4	349.3
1975	325.8	-	14.3	340.1

Source: Tables 3:4, 4:6 and 5:5

Notes: (a) For details of coverage see source tables.

- Not Applicable.

Table 2:7 Part I  
 UK Tri-Service Manpower 1948 - 1975<sup>(a)</sup>  
 UK and Locally Enlisted Personnel: Approximate Numbers (000s)<sup>(b)</sup>

Fin. Year Ending	Tri-Service UK Manpower	Locally Enlisted Personnel			Total LEPS (Estimate)	Tri-Service Total Manpower
		RN/RM(c)	Army	RAF		
1948	1335	..	170	4.0	175	1510
1949	910	..	150	2.5	155	1065
1950	810	..	82	3.0	85	895
1951	815	..	70	3.0	75	890
1952	860	..	66	3.0	70	930
1953	872	..	80	3.5	88	960
1954	875	..	77	5.5	85	960
1955	840	..	73	7.0	80	920
1956	805	..	66	6.0	70	875
1957	752	..	52	3.0	58	810
1958	675	..	46	4.0	50	725
1959	607	..	29	2.0	33	640
1960	557	..	29	1.5	33	590
1961	507	..	30	1.5	33	540
1962	468	2.5	33	1.0	37	505
1963	437	2.5	34	1.0	38	475
1964	426	2.0	31	1.0	34	460
1965	423	2.0	29	1.0	32	455
1966	424	2.0	28	1.0	31	455
1967	417	2.0	30	1.0	33	450
1968	408	2.0	29	1.0	32	440
1969	390	2.0	22	1.0	25	415
1970	373	1.5	19	1.0	22	395
1971	371	1.5	17	0.5	19	390
1972	370	1.0	13	0.5	15	385
1973	370	1.0	8	0.5	10	380
1974	355	1.0	8	0.5	10	365
1975	340	1.0	8	0.5	10	350

Source: Bibliography Items (1), (3), (5), (8) and (27)

Notes: (a) Data on Locally Enlisted Personnel pre 1948 are scanty except for the Army. For Army LEPS 1900 - 1948 See Table 4:5 below.

(b) The data presented in this table are culled from a wide variety of sources of varying reliability; during the process of compilation it has been necessary to make certain assumptions as to who are and who are not LEPS. Consequently the Table is illustrative of the broad LEP - UK personnel split only, and does not purport to give 'accurate' totals of LEP numbers year by year. All numbers have been rounded to a greater or lesser extent.

(c) RN/RM LEPS not available 1948 - 1961 but they were probably around the 2000 - 1500 mark during the period.



Table 2:7 Part II

UK Armed Forces: Locally Enlisted Personnel \*  
(000s) at 1st January each year: Various Years

(000s)

Year	Royal Navy	Army	Royal Air Force	Tri-Service
1946				
1947				
1948				
1949				
1950				
1951				
1952				
1953			7.0	
1954			5.8	
1955			3.0	
1956			3.8	
1957			1.8	
1958			1.7	
1959			1.6	
1960			1.1	
1961	2.7	33.0	1.2	37.9
1962	2.7	33.2	1.1	37.0
1963	2.3	33.8	1.2	37.3
1964	2.1	27.8	1.0	30.9
1965	2.1	29.1	0.9	32.1
1966	2.0	29.4	0.9	<b>32.3</b>
1967	1.9	24.0	0.9	26.8
1968	1.9	23.5	0.9	26.3
1969	1.8	20.4	0.8	23.0
1970	1.6	17.9	0.7	20.2
1971	1.5	13.2	0.6	15.3
1972	1.1	7.7	0.6	9.4
1973	0.8	7.9	0.6	9.3
1974	0.8	8.3	0.4	9.5
1975	0.8	7.7	0.4	8.9

Source: Bibliography Item ( 8 ) 1961-1975 : ( 5 ) RAF 1953-1960.

Notes: \* RAF 1953-1960 are 1st July figures.  
 1974 All Figures are 1st April.

**Table 2:8**  
**UK Tri-Service Manpower: Selected Years 1900 - 1975**  
**Officer - Other Rank Splits (% of each Service Total) (a)**  
**Service Splits (% of Total Strength in each service)**

Year	RN/RM			Army			RAF			Tri-Service		
	% Of Total Strength	RN/RM %		% Of Total Strength	Army %		% Of Total Strength	RAF %		% Of Total Strength	Tri-Serv. %	
		Offs	ORs		Offs	ORs		Offs	ORs		Offs	Total Strength*
1900	21	6.3	93.7	79	4.2	95.8	-	-	-	100	4.8	524000
1908	32	6.4	93.6	68	4.8	95.2	-	-	-	100	5.3	394000
1914	36	6.3	93.7	64	5.0	95.0	-	-	-	100	5.4	407500
1923	28	7.7	92.3	65	5.9	94.1	10.2	89.8	89.8	100	6.8	438900
1928	28	8.8	91.2	63	5.9	94.1	10.9	89.1	89.1	100	7.2	362400
1933	28	9.0	91.0	62	5.8	94.2	10.6	89.4	89.4	100	7.2	331100
1938	28	8.5	91.5	55	5.9	94.1	7.8	92.2	92.2	100	6.9	408800
1947(b)	11	9.2	90.8	71	6.4	93.6	10.4	89.6	89.6	100	7.7	4267800
1952	15	9.8	90.2	55	7.7	92.3	9.6	90.4	90.4	100	8.1	961000
1958	15	11.5	88.5	55	8.1	91.9	11.0	89.0	89.0	100	9.5	804500
1964	21	11.3	88.7	49	9.1	90.9	14.9	85.1	85.1	100	11.3	489000
1970	22	12.1	87.9	50	10.0	90.0	17.6	82.4	82.4	100	12.6	423500
1975	22	13.2	86.4	50	10.8	89.2	18.8	81.2	81.2	100	13.6	375000

**Source:** Tables 3:5, 4:7, 4:8, 4:9 and 5:6 with some additional detail to be found in bibliography item (3)

**Notes:** (a) The officers - Other Ranks splits are based on slightly smaller numbers than the total strength because not all personnel were designated 'officers' or 'other ranks' each year in the data sources.

(b) Excluding Army Personnel on Release Leave and Polish and Allied Forces the % of Total Strength figures would read:  
 RN 14%, ARMY 62%, RAF 24%.

\* cf. Table 2.1 Total Vote A Strength Column.

- RAF was not established until 1919.

Table 2:9

UK Tri-Service Armed Forces: Recruitment by Service: Civil Intake<sup>(a)</sup>  
 Males and Females (000s)

Calendar Year	Royal Navy		Army		Royal Air Force		Tri-Service		
	Males	Females*	Males	Females*	Males	Females*	Males	Females*	Total*
1935	8.8	-	25.4	-	10.2	-	44.4	-	44.4
1936	11.9	-	23.3	-	13.2	-	48.4	-	48.4
1937	16.4	-	27.0	-	13.9	-	57.3	-	57.3
1938	16.4	-	39.8	-	27.4	-	83.6	-	83.6
1939	42.7	..	310.6	10.4	62.3	..	415.6	10.4	426.0
1940	120.5	..	1131.9	21.5	291.7	..	1544.1	21.5	1565.6
1941	143.5	14.2	447.7	58.1	341.8	83.2	933.0	155.5	1088.5
1942	149.9	20.8	431.6	114.9	174.7	78.0	756.2	213.7	969.9
1943	207.7	29.9	237.3	50.3	99.9	28.8	544.9	109.0	653.9
1944	50.8	17.7	251.9	22.9	42.8	12.5	345.5	53.1	398.6
1945	49.5	7.4	200.7	21.6	51.7	2.5	301.9	31.5	333.4
1946	42.3	2.6	202.1	6.9	102.0	6.8	346.4	16.3	362.7
1947	36.2	3.3	157.6	4.7	79.5	9.9	273.3	17.9	291.2
1948	22.3	2.0	129.8	3.9	61.5	5.8	213.6	11.7	225.3
1949	24.7	2.1	135.0	2.4	56.2	3.3	215.9	8.3	224.2
1950	12.1	1.5	149.5	2.9	73.1	3.1	234.7	7.5	242.2
1951	18.5	1.7	136.9	2.5	91.1	4.0	246.5	8.2	254.7
1952	17.8	1.5	170.4	3.7	78.4	3.5	266.6	8.7	275.3
1953	13.7	1.7	156.6	4.4	67.7	2.8	238.0	8.9	246.9
1954	14.3	1.6	145.6	3.1	61.1	1.9	221.0	6.6	227.6
1955	14.2	0.9	140.2	2.0	63.0	1.5	217.4	4.4	221.8
1956	12.4	0.9	160.7	2.5	57.8	1.5	230.9	4.9	235.8
1957	10.3	1.2	106.1	2.0	37.9	1.3	154.3	4.5	158.8
1958	9.6	1.1	101.1	2.5	33.4	1.6	144.1	5.2	149.3
1959	7.5	0.8	78.3	2.6	28.1	2.4	113.9	5.8	119.7
1960	6.7	0.8	71.5	2.5	23.0	2.0	101.2	5.3	106.5
1961	7.5	0.9	31.0	2.9	12.5	2.6	51.0	6.4	57.4
1962	7.8	1.1	36.4	3.4	12.0	3.1	56.2	7.6	63.8
1963	8.3	0.9	24.1	2.4	4.0	1.5	36.9	4.8	41.7
1964	3.6	1.1	30.6	2.6	5.0	1.6	44.2	5.3	49.5
1965	8.3	1.1	25.8	2.7	6.5	1.9	40.6	5.7	46.3
1966	8.1	1.1	25.8	2.8	7.6	2.0	41.5	5.9	47.4
1967	7.8	1.1	21.5	2.4	7.4	2.1	36.7	5.6	42.3
1968	5.1	0.8	17.1	2.3	6.8	1.5	29.0	4.6	33.6
1969/70	5.8	1.0	21.4	2.5	9.0	2.6	36.2	6.1	42.3
1970/71	6.8	1.2	24.3	2.6	9.1	3.0	40.2	6.8	47.0
1971/72	9.7	1.2	31.3	3.0	7.9	2.4	48.9	6.6	55.5
1972/73	9.9	1.2	26.5	2.4	4.7	1.8	41.1	5.4	46.5
1973/74	7.0	1.1	15.3	2.2	5.4	1.4	27.7	4.7	32.4
1974/75	8.1	1.0	24.8	2.3	7.0	1.2	39.9	5.7	45.6

Source: Tables 3:8, 4:15 and 5:11

Notes: .. Not Available.

- Nil.

(a) For details of coverage see notes to source tables.

\* See Table 2:12 footnote \*.



Table 2.10  
Armed Forces Recruitment by Service:  
Applications and Enlistments(a,b,)  
1922 - 1937

Calendar Year	RN/RM		Army		RAF		Total	
	Appl.	Enl.	Appl.	Enl.	Appl.	Enl.	Appl.	Enl.
1922	24200	2320	108950	39380	..	2000	..	43690
1923	39220	6680	86039	30280	..	4290	..	41250
1924	48510	7430	84510	28750	..	2960	..	39130
1925	48860	7230	89280	29830	..	2230	..	39290
1926	48890	7630	83090	27370	..	250	..	35250
1927	48950	4650	83810	25690	..	2450	..	32790
1928	47560	3140	82940	28260	..	2000	..	33400
1929	36610	2660	72270	25970	..	2000	..	30630
1930	43450	2650	66720	27470	..	1800	..	29190
1931	47050	3100	82680	32530	13590	1600	143330	37230
1932	51770	4090	70420	25810	6950	800	129140	30700
1933	50570	6360	71690	27220	7670	900	125920	34480
1934	51780	7460	57810	23690	16390	2000	125980	33150
1935	49640	8160	48130	23760	46860	8000	144640	39920
1936	50790	11510	41050	20200	20170	10000	112010	41710
1937	58550	15790	51410	21870	26790	10400	136750	48060

Source: Bibliography Item (17)

Notes: (a) Some persons may have applied to more than one service each year.

(b) RAF and RN/RM enlistments were restricted through the period and Army Enlistments for some years around the 1930s. (This may also have discouraged applications).

.. Not Available.

**Table 2:11**  
**Armed Forces Recruitment 1935-1975**  
**Total Intake from Civil Life (Males + Females) (a)**  
**By Service and Nature of Recruitment (000s)**

Calendar Year <sup>(b)</sup>	RN/RM*		Army*		RAF*		Tri-Service*		
	Comm. <sup>(c)</sup>	Other <sup>(d)</sup>	Comm.	Other	Comm.	Other	Comm.	Other	Total
1935	8.8	-	24.6	0.8	10.2	-	43.6	0.8	44.4
1936	11.9	-	22.5	0.8	13.2	-	47.6	0.8	48.4
1937	16.4	-	26.1	0.9	13.9	-	56.4	0.9	57.3
1938	16.4	-	38.8	1.0	27.4	-	82.6	1.0	83.6
1939	19.6	23.1	47.2	273.8	-	62.3	66.8	359.2	426.0
1940	10.1	110.4	27.9	1125.5	291.7	-	..	..	1565.6
1941	20.2	137.5	65.4	440.4	425.0	-	..	..	1088.5
1942	24.4	146.3	119.9	426.6	252.7	-	..	..	969.9
1943	32.3	205.3	56.0	231.6	128.7	-	..	..	653.9
1944	20.0	48.5	32.9	241.9	65.3	-	..	..	398.6
1945	11.0	45.9	36.9	185.4	54.2	-	..	..	333.4
1946	19.0	25.9	39.5	169.5	108.8	-	..	..	362.7
1947	26.8	12.7	39.8	122.5	41.3	48.1	107.9	183.3	291.2
1948	20.5	3.8	32.5	101.2	20.4	46.9	73.4	151.9	225.3
1949	18.6	8.2	21.7	115.7	16.3	43.7	56.6	167.6	224.2
1950	11.7	1.9	31.4	121.0	23.7	52.5	46.8	175.4	242.2
1951	12.7	7.5	21.3	118.1	47.7	47.4	81.7	173.0	254.7
1952	12.4	6.9	46.6	127.5	42.1	39.8	101.1	174.2	275.3
1953	11.5	3.9	47.7	113.3	33.8	36.7	93.0	153.9	246.9
1954	10.0	5.9	38.4	110.3	29.6	33.4	78.0	149.6	227.6
1955	8.9	6.2	33.4	108.8	22.3	42.2	64.6	157.2	221.8
1956	9.7	3.6	38.6	124.6	22.6	36.7	70.9	164.9	235.8
1957	8.7	2.8	29.5	78.6	18.4	20.8	56.6	102.2	158.8
1958	9.7	1.0	33.5	70.1	22.9	12.1	66.1	83.2	149.3
1959	8.0	0.3	31.2	49.7	19.2	11.3	58.4	61.3	119.7
1960	7.4	0.1	23.4	50.6	15.9	9.1	46.7	59.8	106.5
1961	8.4	-	33.9	-	15.1	-	57.4	-	57.4
1962	8.9	-	39.8	-	15.1	-	63.8	-	63.8
1963	9.7	-	26.5	-	5.5	-	41.7	-	41.7
1964	9.7	-	33.2	-	6.6	-	49.5	-	49.5
1965	9.4	-	28.5	-	8.4	-	46.3	-	46.3
1966	9.2	-	28.6	-	9.6	-	47.4	-	47.4
1967	8.9	-	23.9	-	9.5	-	42.3	-	42.3
1968	5.9	-	19.4	-	8.3	-	33.6	-	33.6
1969/70	6.8	-	23.9	-	11.6	-	42.3	-	42.3
1970/71	8.0	-	26.9	-	12.1	-	47.0	-	47.0
1971/72	10.9	-	34.3	-	10.3	-	55.0	-	55.0
1972/73	11.1	-	28.9	-	6.5	-	46.5	-	46.5
1973/74	8.1	-	17.5	-	6.8	-	32.4	-	32.4
1974/75	9.1	-	27.1	-	9.4	-	45.6	-	45.6

**Source:** Bibliography Items (27) 1935-1968, (8) 1969-70 - 1974-75

**Notes:** .. Not Available - Nil.

(a) See Table 3:8 Note (a) for full details of coverage.

(b) 1969-1975 figures are on a financial year basis (April-March).

(c) Regular and Short Service Commissions.

(d) Post War; National Servicemen Call up.

\* 1935-1940 Female recruitment data is incomplete. See Table 2:12 footnote \* for details.

Table 2:12

U.K. Tri-Service Armed Forces: Recruitment: Civil Intake (a)  
Males and Females (000s)

(000s)

Calendar Year	Tri-Service Males			Tri-Service Females			Tri-Service Total*
	Regular	Other	Total	Regular	Nursing	Total*	
1935	43.6	0.8	44.4	-	-	-	44.4
1936	47.6	0.8	48.4	-	-	-	48.4
1937	56.4	0.9	57.3	-	-	-	57.3
1938	82.6	1.0	83.6	-	-	-	83.6
1939	56.4	359.2	415.6	10.4	..	10.4	426.0
1940	..	..	1544.1	21.5	..	21.5	1565.6
1941	..	..	933.0	155.5	..	155.5	1088.5
1942	..	..	756.2	213.7	..	213.7	969.9
1943	..	..	544.9	109.0	..	109.0	653.9
1944	..	..	345.5	47.9	5.2	53.1	398.6
1945	..	..	301.9	29.3	2.2	31.5	333.4
1946	..	..	346.4	15.9	0.4	16.3	362.7
1947	90.0	183.3	273.3	17.3	0.6	17.9	291.2
1948	61.7	151.9	213.6	11.2	0.5	11.7	225.3
1949	48.3	167.6	215.9	7.8	0.5	8.3	224.2
1950	59.3	175.4	234.7	6.8	0.7	7.5	242.2
1951	73.5	173.0	246.5	7.4	0.8	8.2	254.7
1952	92.4	174.2	266.6	7.8	0.9	8.7	275.3
1953	84.1	153.9	238.0	8.0	0.9	8.9	246.9
1954	71.4	149.6	221.0	5.9	0.7	6.6	227.6
1955	60.2	157.2	217.4	3.7	0.7	4.4	221.8
1956	66.0	164.9	230.9	4.1	0.8	4.9	235.8
1957	52.1	102.2	154.3	3.8	0.7	4.5	158.8
1958	60.9	83.2	144.1	4.6	0.6	5.2	149.3
1959	52.6	61.3	113.9	5.2	0.6	5.8	119.7
1960	41.4	59.8	101.2	4.7	0.6	5.3	106.5
1961	51.0	-	51.0	5.7	0.7	6.4	57.4
1962	56.2	-	56.2	6.8	0.8	7.6	63.8
1963	36.9	-	36.9	4.2	0.6	4.8	41.7
1964	44.2	-	44.2	4.8	0.5	5.3	49.5
1965	40.6	-	40.6	5.1	0.6	5.7	46.3
1966	41.5	-	41.5	5.2	0.7	5.9	47.4
1967	36.7	-	36.7	5.0	0.6	5.6	42.3
1968	29.0	-	29.0	4.0	0.6	4.6	33.6
1969/70	36.2	-	36.2	..	..	6.1	42.3
1970/71	40.2	-	40.2	..	..	6.8	47.0
1971/72	48.9	-	48.9	..	..	6.6	55.5
1972/73	41.1	-	41.1	..	..	5.4	46.5
1973/74	27.7	-	27.7	..	..	4.7	32.4
1974/75	39.9	-	39.9	..	..	5.7	45.6

Source: Tables 3:8, 4:18 and 5:11

Notes: .. Not Available.  
- Nil.

(a) For details of coverage see notes to source tables (and \* below).

\* Numbers shown understate total civil intake in early years as they exclude Nursing Recruits 1935-1943 and WRNS and WRAF recruits 1939 and 1940. The actual total female civil intake was probably very significantly higher than that suggested in the table in 1939 and 1940 and slightly higher 1935-1938 and (more significantly) 1941-1943. (See also footnote (d) in source tables).



Table 2:13  
Global Distribution of the UK Armed Services  
Navy, Army, Air Force and Total 1965-66 and 1973-74  
% of Total Strength

Location	1965 - 1966				1973 - 1974			
	Navy (b)	Army	RAF	Total	Navy (b)	Army	RAF	Total
UK (i.e. Home Forces)								
Europe	75.2	43.2	68.0	57.3	91.7	56.1	79.8	70.7
Mediterranean	..	25.4	6.7	14.3	0.4	33.6	9.6	19.5
Middle East (a)	4.9	4.6	7.6	5.5	3.3	2.6	7.2	4.0
Far East	4.3	7.9	6.1	6.8	-	..	0.6	0.2
Elsewhere	13.8	17.8	7.9	14.1	2.9	6.9	1.6	4.5
	1.8	1.1	3.7	2.0	1.7	0.8	1.2	1.1
Total Strength	100	100	100	100	100	100	100	100
%	100	221	130	451	81	181	101	363

Source: Bibliography Item (8) and Ministry of Defence Sources

Notes: (a) Aden, Persian Gulf, Mauritius.

(b) Includes Personnel at Sea as appropriate.

Fin. Year Ending	Actual Strength (a,b,c)	Vote A (b,c) (Maximum)	Fin. Year Ending	Actual Strength Cont'd.	Vote A Cont'd.
1900	103585	110340	1940	101000	-
1901	112429	114800	1941	282000	-
1902	117116	118625	1942	421000	-
1903	121870	122500	1943	536600	-
1904	125948	127100	1944	726600	-
1905	130490	131100	1945	868300	-
1906	127637	128000	1946	866000	-
1907	127431	128000	1947	373200	492800
1908	137228	128000	1948	197600	204000
1909	126935	128000	1949	144750	167300
1910	127938	128000	1950	141900	153000
1911	130817	131000	1951	138750	143000
1912	132792	134000	1952	141700	149000
1913	136443	137500	1953	145400	153000
1914	142960	146000	1954	139700	151000
1915	198451	250000	1955	131100	139000
1916	297008	350000	1956	125250	133000
1917	349578	350000	1957	119050	128000
1918	406977	..	1958	111300	121500
1919	381311	..	1959	102800	112000
1920	176087	275000	1960	98150	106000
1921	124009	136000	1961	94800	102000
1922	127180	148700	1962	95050	100000
1923	107782	121400	1963	95800	100000
1924	99107	100923	1964	96700	100000
1925	99453	100787	1965	97600	103000
1926	100284	103025	1966	98200	104000
1927	100791	103125	1967	97400	103000
1928	101916	102725	1968	96000	100500
1929	100680	102250	1969	92800	98000
1930	99300	100300	1970	87150	95500
1931	94921	97550	1971	84300	90000
1932	92449	94200	1972	82450	87000
1933	89667	92275	1973	81235	85000
1934	89863	91165	1974	79750	84000
1935	91351	93222	1975	78800	82500
1936	94259	95370			
1937	99886	102016			
1938	107040	112825			
1939	120000	147113			

Source: Bibliography Items (1) (3), (10), (27)

Notes: .. Not Available - Not Applicable (There was no set max. for these years).

- (a) 1899-1900 - 1937-38 Monthly Average April - March: 1938-39 Estimate based on March 1938 and June 1939 Actuals: 1939-40 Actual Aug. 1939: 1940-41 - 1947-48 30th June Actuals: 1948-49 - 1973-74 Average of 1st April Actuals current and following Financial Years. (e.g. 1948-1949 = 1st April 1948 + 1st April 1949 ÷ 2). (1958-59, 1959-60 part estimates).
- (b) 1899-1900 - 1921-22 No Royal Marine Police Category: 1922-23 - 1937-38 'Actuals' exclude but 'Vote A's' include Royal Marine Police. 1938-39 - 1946-47 both include Police. 1947-48 on, no Police category.
- (c) 1939-40 - 1946-47 Both 'Actuals' and 'Vote A's' include Locally Enlisted Personnel. 1947-48 on, 'Actuals' exclude but 'Vote A's' include Locally Enlisted Personnel (LEPs). Pre 1939-40 the position is unclear. Either there were insignificant LEPs or else they were (probably) included in both 'Actuals' and 'Vote A' as a matter of course.

Table 3:2

Royal Navy Personnel: Strengths 1935-1975

By Males, Females and Nurses (000s)

(000s)				
Year	Royal Navy Royal Marines (Males)	Womens Royal Navy Service (Females)	QARNNS (Females)	Royal Navy Total
1935 <sup>a</sup>	92.8	-	-	92.8
1936	98.2	-	-	98.2
1937	102.8	-	-	102.8
1938	112.7	-	-	112.7
1939	129.1	-	-	129.1
1940	276.3	5.6	0.1	282.0
1941	405.0	15.1	0.9	421.0
1942	506.7	28.6	1.3	536.6
1943	671.0	53.3	2.3	726.6
1944	790.0	73.5	3.8	867.3
1945	788.8	72.0	5.2	866.0
1946	350.0	20.5	2.7	373.2
1947	189.6	7.4	0.8	197.8
1948 <sup>b</sup>	135.3	7.0	0.7	143.0
1949	136.9	6.4	0.7	144.0
1950	129.4	5.4	0.5	135.3
1951	135.8	4.9	0.5	141.2
1952	141.2	4.6	0.5	146.3
1953	138.0	4.7	0.4	143.1
1954	127.7	4.5	0.4	132.6
1955	122.1	4.1	0.4	126.6
1956	116.1	3.5	0.4	120.0
1957	110.1	3.4	0.3	113.8
1958	101.8	3.3	0.3	105.4
1959	96.7	3.3	0.3	100.3
1960	93.4	3.1	0.3	96.8
1961	91.4	2.9	0.3	94.6
1962	90.6	3.0	0.3	93.9
1963	92.7	3.1	0.4	96.2
1964	94.3	3.0	0.5	97.8
1965	94.6	3.1	0.5	98.2
1966	93.6	3.1	0.5	97.2
1967	92.9	3.3	0.5	96.7
1968	90	3.2	0.5	93.5
1969	86	2.9	0.5	89.5
1970	82	2.8	0.5	85.5
1971	79	2.7	0.6	82.5
1972	78	2.9	0.6	81.5
1973	77	3.0	0.6	80.5
1974	75	..	3.6	78.6
1975	74	..	3.6	77.6

Source: Bibliography Items (8) and (27)

Notes: .. Not Available.

- Not Applicable.

(a) Actual Strengths including Locally Enlisted Personnel and Royal Marine Police. 1935-1938 at 31st March. 1939-1947 at 30th June. 1935-1945 and 1968-1973 QARNNS figures are estimates.

(b) Actual Strengths excluding Locally Enlisted Personnel and Royal Marine Police 1948-1975 at 30th June.



Table 3:3

UK Royal Navy Vote A (Maximum) Strengths 1899-1900 - 1974/75  
By Branches of the Service

Fin. Year Ending	Royal Navy + Coastguards (a)	Royal Marines (a)	Other Services (b)	Womens R.N.S. (c)	Misc. (d)	Total (e)
1900	83522	18290	8828	-	-	110640
1901	87021	18590	9269	-	-	114800
1902	89523	19590	9512	-	-	118625
1903	92891	19589	10020	-	-	122500
1904	97622	19580	9898	-	-	127100
1905	101287	20378	9435	-	-	131100
1906	101140	19983	7877	-	-	129000
1907	102748	19235	7017	-	-	129000
1908	103582	18371	6047	-	-	128000
1909	103538	18346	6116	-	-	128000
1910	104132	17603	6265	-	-	128000
1911	107236	17185	6579	-	-	131000
1912	109345	16960	7659	-	-	134000
1913	111077	17063	7860	-	1500	137500
1914	118182	18235	9583	-	-	146000
1915	121208	18585	11207	-	99000	250000
1916	..	..	..	..	..	350000
1917	..	..	..	..	..	350000
1918	..	..	..	..	..	..
1919	..	..	..	..	..	..
1920	228753	37896	8351	-	-	275000
1921	113269	16577	6154	-	-	136000
1922	101297	14837	7566	-	25000	148700
1923	99299	13742	8139	-	320	121400
1924	86252	9832	4558	-	281	100923
1925	83361	9869	7270	-	287	100787
1926	85033	10580	7062	-	350	103025
1927	85656	11014	6005	-	450	103125
1928	88318	10531	3426	-	450	102725
1929	87869	10531	3401	-	450	102250
1930	86973	10249	2578	-	500	100300
1931	84746	10034	2270	-	500	97550
1932	81642	9697	2311	-	550	94200
1933	79459	9666	2285	-	865	92275
1934	77766	9344	3190	-	865	91165
1935	79409	9526	3403	-	884	93222
1936	81152	9835	3495	-	888	95370
1937	86756	10412	3986	-	892	102046
1938	94590	10976	6434	-	895	112895
1939	100508	11668	6824	-	28413	147413
1940	..	..	..	..	..	161000
1941	238000	27100	11200	5600	100	282000
1942	348300	42800	13900	15100	900	421000
1943	435800	59900	11000	28600	1300	536600
1944	586100	74300	10600	53300	2300	726600
1945	699300	78600	12100	73500	3800	868300

For footnotes etc. see end of Table.

Table 3:3

(Royal Navy Vote A Strengths by Branches of the Service) Continued

Fin. Year Ending	Royal Navy	Royal Marines	Other Services	Womens R.N.S.	Misc.	Total
1946	698400	77600	12800	72000	5100	866000
1947	320100	26700	3200	20500	2700	372200
1948	194650	18150	..	7400	13800	204000
1949	144170	14830	-	8000	300	167300
1950	131725	13775	-	7200	300	153000
1951	124045	12755	-	5960	240	143000
1952	126100	12085	-	5085	5730	149000
1953	135600	11700	-	5475	225	153000
1954	134100	11800	-	4875	225	151000
1955	122950	11015	-	4810	225	139000
1956	117340	10860	-	4575	225	133000
1957	113360	10040	-	3980	220	128000
1958	107870	10040	-	3370	220	121500
1959	99080	9260	-	3450	210	112000
1960	93100	9180	-	3420	300	106000
1961	89300	8955	-	3375	370	102000
1962	87550	8830	-	3250	370	100000
1963	86970	9360	-	3250	420	100000
1964	86820	9450	-	3250	480	100000
1965	89700	9500	-	3250	500	103000
1966	90200	9980	-	3290	530	104000
1967	89400	9730	-	3270	600	103000
1968	87310	9320	-	3270	600	100500
1969	84690	9370	-	3320	620	98000
1970	82400	9200	-	3300	600	95500
1971	78010	8400	-	2950	640	90000
1972	75150	8350	-	2870	630	87000
1973	73300	8100	-	2930	670	85000
1974	71900	8300	-	3080	720	84000
1975	69950	8700	-	3130	720	82500

Source: Bibliography items (3), (10) and (27)

- Notes:
- (a) Coastguards effectively ceased as a separate category from 1924-25 on.  
1899-1900 - 1926-27 RN/RM included only Sea Service  
1927-28 - 1937-38 RN/RM included all Naval Personnel except Boys in training and Royal Marine Police.  
1940-41 - 1946-47 RN/RM Covered all Male Naval Personnel except Merchant Seamen enlisted on T124 agreements.  
1947-48 on RN/RM Covered all Male Naval Personnel.
  - (b) 1899-1900 - 1926-27 Fleet Services (Victualling, shore Establishment and so on) and Boys in Training and most Cadets.
  - (c) WINS personnel were not noted prior to 1940-41.
  - (d) Supplementary Vote A Estimates (1913, 1915, 1922, 1939, 1948, 1952)  
Royal Marine Police 1922-23 - 1938-39.  
1940-41 - 1974-75 Queen Alexandra's Royal Naval Nursing Service (QARNNS).
  - (e) These totals correspond to those shown in table 3:1 of Vote A strengths except for 1939-40 - 1946-47 when they correspond to the 'Actuals' totals of the same table.

> ((b) Cont'd): 1927-28 - 1937-38 Boys in Training: 1940-41 - 1946-47 T124 Enlistees.

Table 3:4

Royal Navy: Personnel: Strengths 1948-1975<sup>(a)</sup>  
By Male Regulars, National Servicemen and Females  
(000s) at 1st April each year

(000s)				
Year	RN (Male Regulars)	RN (Nat. Service)	RN (Females)	RN Total
1946				
1947				
1948				
1949	120.1	17.1	7.3	144.5
1950 <sup>b</sup>	122.3	11.0	6.0	139.3
1951	125.6	7.2	5.4	138.2
1952	135.5	4.6	5.1	145.2
1953	133.7	6.7	5.2	145.6
1954	121.0	7.8	5.0	133.8
1955	114.2	9.5	4.7	128.4
1956	106.6	11.6	3.9	122.1
1957	102.7	9.6	3.7	116.0
1958	97.8	5.3	3.5	106.6
1959	95.8	2.2	3.6	101.6
1960	93.7	0.6	3.5	97.8
1961	91.9	0.1	3.3	95.3
1962	91.0	-	3.3	94.3
1963	92.3	-	3.5	95.8
1964	94.1	-	3.5	97.6
1965	95.0	-	3.6	98.6
1966	94.2	-	3.6	97.8
1967	93.2	-	3.8	97.0
1968	91.3	-	3.8	95.1
1969	86.7	-	3.5	90.2
1970	82.8	-	3.3	86.1
1971	79.2	-	3.3	82.5
1972	78.9	-	3.5	82.4
1973	77.6	-	3.6	81.2
1974 <sup>b</sup>	74.7	-	3.6	78.3
1975	74.4	-	3.6	78.0

Source: Bibliography Items (7), (8), (9).

Notes: (a) Excludes Locally Enlisted Personnel.

(b) Estimates in whole or part.  
 - Not Applicable.



Table 3:5

UK Royal Navy Manpower 1899-1900 - 1974-75  
 RN, RM and WRNS Officer - Other Ranks splits

Fin. Year Ending	Royal Navy		Royal Marines		Royal Navy/Royal Marines			Total RN Vote A
	Officers	ORs	Officers	ORs	Officers	ORs	Os+ORs	
1900	5964	77558	466	17824	6430	95382	101812	110640
1901	6188	80833	476	18114	6664	98947	105611	114800
1902	6449	83074	504	19086	6953	102160	109113	118625
1903	6796	86095	503	19086	7299	105181	112480	122500
1904	7007	90615	506	19074	7513	109689	117202	127100
1905	7243	94044	505	19873	7748	113917	121665	131100
1906	7414	93726	511	19472	7925	113198	121123	129000
1907	7331	95417	513	18722	7844	114139	121983	129000
1908	7348	96234	514	17857	7862	114091	121953	128000
1909	7382	96156	502	17844	7884	114000	121884	128000
1910	7426	96706	502	17101	7928	113807	121735	128000
1911	7508	99728	493	16692	8001	116420	124421	131000
1912	7724	101621	483	16477	8207	118098	126305	134000
1913	7869	103208	487	16576	8356	119784	128140	136000
1914	8155	110027	502	17733	8657	127760	136417	146000
1915 <sup>a</sup>	8510	112698	513	18072	9023	130770	139793	151000
.....	.....	.....	...	.....	.....	.....	.....	.....
1920	23339	205414	1063	36833	24402	242247	266649	275000
1921	10648	102621	574	16003	11222	118624	129846	136000
1922 <sup>a</sup>	8935	92362	505	14332	9440	106694	116134	123700
1923 <sup>b</sup>	8226	90973	461	13281	8687	104254	112941	121400
1924	6557	79695	425	9407	6982	89102	96084	100923
1925	6849	76512	441	9428	7290	85940	93230	100787
1926	6634	78399	401	10179	7035	88578	95613	103025
1927	6610	79046	404	10610	7014	89656	96670	103125
1928	8273	80045	447	10084	8720	90129	98849	102725
1929	8149	79719	444	10087	8593	89806	98399	102250
1930	8114	78859	430	9819	8544	88678	97222	100300
1931	7873	76873	415	9619	8288	86492	94780	97550
1932	7758	73884	415	9282	8173	83166	91339	94200
1933	7617	71842	405	9261	8022	81103	89125	92275
1934	7457	70309	409	8935	7866	79244	87110	91165
1935	7366	72043	418	9108	7784	81151	88935	93222
1936	7418	73734	427	9408	7845	83142	90987	95370
1937	7581	79175	459	9953	8040	89128	97168	102046
1938	8446	86144	478	10498	8924	96642	105566	112895
1939 <sup>a</sup>	9271	91237	506	11162	9777	102399	112176	119913
.....	.....	.....	...	.....	.....	.....	.....	.....
1947 <sup>c</sup>	43000	405000	2000	40000	45000	445000	490000	492800
1948 <sup>a</sup>	16850	156000	930	17220	17780	173220	191000	191000

For footnotes etc. See end of Table.

Table 3:5

(RN Manpower Officer - Other Ranks Splits) Continued

Fin. Year Ending	Royal Navy		Royal Marines		WRNS		RN/RM/WRNS			Total RN Vote A
	OFFs	ORs	OFFs	ORs	OFFs	ORs	OFFs	ORs	Os+ORs	
1949 <sup>d</sup>	14370	127800	830	14000	400	7600	15600	149400	165000	167300
1950 <sup>d</sup>	13725	113600	775	13000	400	6800	14900	133400	148300	153000
	13725	118000	775	13000	400	6800	14900	137800	152700	153000
1951 <sup>a</sup>	12545	111500	705	12050	330	5630	13580	129180	142760	143000
1952 <sup>a</sup>	13100	113000	685	11400	300	4785	14085	129185	143270	143500
1953	14800	120800	650	11050	275	5200	15725	137050	152775	153000
1954	14500	119600	660	11140	305	4570	15465	135310	150770	151000
1955	14250	108700	685	10330	310	4500	15345	123330	138575	139000
1956	13840	103500	680	10180	300	4275	14820	117955	132775	133000
1957	13360	100000	680	9760	280	3700	14320	113460	127780	128000
1958	12970	94900	670	9370	270	3100	13910	107370	121280	121500
1959	12180	86900	660	8600	250	3200	13090	98700	111790	112000
1960	10900	82200	580	8600	250	3170	11730	93970	105700	106000
1961	10300	79000	580	8375	250	3125	11130	90500	101630	102000
1962	10250	77300	580	8250	250	3000	11080	88550	99630	100000
1963	10170	76800	610	8750	250	3000	11030	88550	99580	100000
1964	10320	76500	630	8820	250	3000	11200	88320	99520	100000
1965	10700	79000	650	8900	250	3000	11600	90900	102500	103000
1966	10800	79400	730	9250	270	3020	11800	91670	103470	104000
1967	11000	78400	730	9000	270	3000	12000	90400	102400	103000
1968	10980	76330	720	8600	270	3000	11970	87930	99900	100500
1969	10800	73890	720	8650	270	3050	11790	85590	97380	98000
1970	10550	71850	700	8500	250	3050	11500	83400	94900	95500
1971	10400	67610	750	7650	250	2700	11400	77960	89360	90000
1972	10000	65150	700	7650	270	2600	10970	75400	86370	87000
1973	9800	63500	700	7400	280	2650	10780	75550	86330	87000
1974	9800	62100	700	7600	280	2800	10780	72500	83280	84000
1975	9800	60150	700	8000	300	2830	10800	70980	81780	82500

Source: Bibliography items (3), (10).

- Notes: (a) Excluding Supplementary Vote A of 1500 (1913): of 9900 (1915): of 25,000 (1922): of 27,500 (1939): of 13,000 (1948): of 5,500 (1952).
- (b) As from 1922-23 Royal Military Police were noted separately from the RN category. They are included here only in the Vote A total. (See also Table 3:1 note (b)).
- (c) 1946-47, 1947-48 RN columns include WRNS personnel.
- (d) From 1949-50 (second line) Boys in training and Artificers previously noted only in the Vote A column are included under the RN other Ranks head. From 1949-50 the difference between RN/RM/WRNS Total and Vote A total is accounted for wholly by the (female) Nursing Service - QARNNS. No representative data are available for 1915-16 - 1918-19 and 1939-40 - 1945-46 in the data source.

Table 316

UK Royal Navy Manpower Estimated Vote A (Maximum) Strengths 1900-1975

RN Males on Sea Service Officers and Other Ranks by Sub-divisions

Fin. Year Ending	Flag Officers	Commissioned Officers	Warrant and Subordinate Officers	Petty Officers + Men	Boys in Service	Total
1900	15	3571	2378	73858	3700	83522
1901	15	3717	2456	77133	3700	87021
1902	15	3843	2591	79374	3700	89523
1903	16	4136	2644	82395	3700	92891
1904	20	4241	2746	86915	3700	97622
1905	20	4437	2786	90644	3400	101287
1906	25	4533	2856	91026	2700	101140
1907	24	4636	2671	93124	2293	102748
1908	26	4689	2633	94291	1943	103582
1909	26	4721	2635	94522	1634	103538
1910	28	4791	2607	94912	1794	104132
1911	27	4772	2709	97579	2149	107236
1912	26	4794	2904	99460	2161	109345
1913	28	4826	3015	100607	2601	111077
1914	29	5366	2760	105548	4479	118182
1915	29	5405	3076	107324	5374	121208
....	..	....	....	.....	....	.....
1920		16491	6848	198776	6638	228753
1921		7051	3597	100021	2600	113269
1922		6085	2850	89996	2366	101297
1923		5562	2664	88165	2808	99299
1924		4320	2237	76455	3240	86252
1925		4776	2073	73932	2580	83361
1926		4785	1849	75671	2728	85033
1927		5008	1602	75946	3100	85656
1928 <sup>a</sup>		6039	2234	76945	3100	88318
1929		5897	2252	76769	2950	87869
1930		5885	2229	76782	2077	86973
1931		5767	2106	75641	1232	84746
1932		5681	2077	72915	969	81642
1933		5527	2090	70686	1156	79459
1934		5408	2049	68618	1691	77766
1935		5317	2049	69869	2174	79409
1936		5468	1950	71032	2702	81152
1937		5587	1994	76175	3000	86756
1938		5951	2495	82294	3850	94590
1939		6642	2629	86702	4535	100508
1940		7553	3300	109294	....	120147
....		....	....	.....	....	.....

For footnotes etc. See end of Table.



Table 3:6  
(RN Males at Sea by Rank sub-divisions) Continued

Fin. Year Ending	Flag Officers	Commissioned Officers	(Warrant and) Subordinate Officers	Petty Officers + Men	Boys	Total
1947b		43000		405000		448000
1948		13300	3550	156000		172850
1949	65	11505	2800	120900	6900	142170
1950 <sup>c</sup>	65	10925	2735	109000	4600	127325
....	..	.....	....	.....	....	.....
1950	92	12353	1280	118000		131725
1951	95	11310	1140	111500		124045
1952	86	11374	1640	113000		126100
1953	96	12534	2170	120800		135600
1954	94	12541	1865	119600		134100
1955	93	12077	2080	108700		122940
1956	93	11567	2180	103500		117340
1957	93	11347	1920	100000		113360
1958	91	11099	1780	94900		107870
1959	89	10791	1300	86900		99080
1960	81	9819	1000	82200		93100
1961	79	9321	900	79000		89300
1962	76	9199	975	77300		87550
1963	71	9174	925	76800		86970
....	..	....	...	.....		.....
	Flag Officers	Senior Officers <sup>(d)</sup>	Junior Officers <sup>(e)</sup>	Ratings (Includes Boys)		Total <sup>(f)</sup>
1964	74	4509	5707	75180		85470
1965	74	4602	5894	77460		88030
1966	74	4592	6029	76805		87500
1967	74	4594	6242	77240		88150
1968	73	4625	6202	75040		85940
1969	73	4420	6187	72380		83060
1970	73	4463	5864	68780		79180
1971	71	4368	5751	63590		73780
1972	69	4113	5578	61410		71170
1973	64	3870	5616	60010		69560
1974	66	3771	5703	58170		67710
1975	67	3773	5730	57750		67321

Source: Bibliography Item (3).

- Notes:
- (a) From 1927-28 all non-sea service personnel except boys in training are included with sea service personnel. Therefore figures from 1927-28 are not strictly comparable with those before that date.
  - (b) From 1946-47 boys in Training included (in the 'boys in Service' category) in the table.
  - (c) From 1949-50 (second line) the categories change slightly. 'Flag Officers' now includes Officers of relative flag rank. 'Commissioned Officers' now also includes most officers previously classed as Warrant Officers. The Warrant Officer Class ceased to exist.
  - (d) Senior Officers = Captains, Commanders and Lt. Commanders.
  - (e) Junior Officers = Lieutenant to Midshipman.
  - (f) See Table 3.7 footnote (c)

Table 3:7

UK Royal Navy Manpower Estimated Vote A (Maximum) Strengths 1900/1975  
Royal Marines Officers and Other Ranks by Sub-Divisions.

Fin. Year Ending	Commissioned Officers	Warrant Officers	Staff Serj. and Serj.	Musical Ranks(a)	Rank & File	Band Boys	Total
1900	434	32	1307	604	15913	-	18290
1901	444	32	1361	620	16133	-	18590
1902	471	33	1417	647	17022	-	19590
1903	471	32	1417	647	17022	-	19589
1904	474	32	1417	647	17010	-	19580
1905	468	37	1459	995	17419	-	20378
1906	467	44	1415	646	17411	-	19983
1907	469	44	1421	1466	15472	363	19235
1908	471	43	1385	1520	14720	232	18371
1909	458	44	1370	1426	14646	403	18346
1910	457	45	1329	1607	13915	250	17603
1911	449	44	1326	1674	13468	224	17185
1912	425	58	1299	1641	13296	241	16960
1913	420	67	1300	1708	13546	272	17063
1914	422	80	1302	1762	14401	268	18235
1915	428	85	1353	1801	14691	227	18585
.....	....	..	.....	.....	.....	....	.....
1920	953	110		36833			37896
1921	442	132		16003			16577
1922	395	110		14332			14837
1923	371	90		13231			13742
1924	357	68		9407			9832
1925	372	69		9428			9869
1926	349	52		10179			10580
1927	354	50		10610			11014
1928	406	41		10084			10531
1929	403	41		10087			10531
1930	391	39		9819			10249
1931	378	37		9619			10034
1932	333	32		9282			9397
1933	367	38		9261			9666
1934	369	40		8935			9344
1935	382	36		9108			9526
1936	392	35		9408			9835
1937	423	36		9953			10412
1938	443	35		10498			10976
1939	476	30		11162			11668
1940	510	42		12301			12853
.....	....	..		.....			.....

For footnotes etc. see end of Table.

**Table 3:7**  
**(Royal Marines by Rank Sub-Divisions) Continued**

Fin. Year Ending	Commissioned Officers		Warrant Officers	Other Ranks	Total
1946					
1947			2000	40000	42000
1948	880		50	17220	18150
1949	788		42	14000	14830
1950	733		42	13000	13775
1951			705	12050	12755
1952			685	11400	12085
1953			650	11050	11700
1954			660	11140	11800
1955			685	10330	11015
1956			680	10180	10860
1957			680	9760	10440
1958			670	9370	10040
1959			660	8600	9260
1960			580	8600	9180
1961			580	8375	8955
1962			580	8250	8830
1963			610	8750	9360
.....			...	.....	.....
	General Officers	Senior Officers (b)	Junior Officers	Other Ranks	Total
1964c	4	106	515	8755	9380
1965	4	113	513	8800	9430
1966	5	108	552	9135	9800
1967	5	114	571	8780	9470
1968	4	116	590	8380	9070
1969	4	116	580	8110	8810
1970	4	117	569	7910	8600
1971	4	116	560	7350	8030
1972	4	117	529	7460	8110
1973	5	113	517	7130	7765
1974	5	106	529	7320	7960
1975	5	106	520	7650	8281

**Source:** Bibliography Item (3)

**Notes:** (a) Musicians, Buglers and Band Ranks.

(b) Colonels, Lt. Colonels and Majors.

(c) Numbers from 1963-64 on are estimated average strengths rather than Vote A Maxima. Therefore the totals shown no longer match those shown for RM (Vote A) in Table 3:5.



**Royal Navy: Recruitment: Civil Intake <sup>(a)</sup>**  
**Males and Females (OOOs)**

(OOOs)

Calendar Year <sup>(b)</sup>	Royal Navy Males			Royal Navy Females <sup>(d)</sup>			Royal Navy Total
	Regular <sup>(c)</sup>	Other <sup>(c)</sup>	Total	WRNS	QARNNS	Total	
1935	8.8	-	8.8	-	-	-	8.8
1936	11.9	-	11.9	-	-	-	11.9
1937	16.4	-	16.4	-	-	-	16.4
1938	16.4	-	16.4	-	-	-	16.4
1939	19.6	23.1	42.7	..	..	..	42.7
1940	10.1	110.4	120.5	..	..	..	120.5
1941	6.0	137.5	143.5	14.2	..	14.2	157.7
1942	3.3	146.3	149.9	20.8	..	20.8	170.7
1943	2.4	205.3	207.7	29.9	..	29.9	237.6
1944 e	2.3	48.5	50.8	15.8	1.9	17.7	68.5
1945 e	3.6	45.9	49.5	5.9	1.5	7.4	56.9
1946	16.4	25.9	42.3	2.5	0.1	2.6	44.9
1947	23.5	12.7	36.2	3.0	0.3	3.3	39.5
1948	18.5	3.8	22.3	1.7	0.3	2.0	24.3
1949	16.5	8.2	24.7	2.0	0.1	2.1	26.8
1950	10.2	1.9	12.1	1.4	0.1	1.5	13.6
1951	11.0	7.5	18.5	1.6	0.1	1.7	20.2
1952	10.9	6.9	17.8	1.4	0.1	1.5	19.3
1953	9.8	3.9	13.7	1.6	0.1	1.7	15.4
1954	8.4	5.9	14.3	1.5	0.1	1.6	15.9
1955	8.0	6.2	14.2	0.8	0.1	0.9	15.1
1956	8.8	3.6	12.4	0.8	0.1	0.9	13.3
1957	7.5	2.8	10.3	1.1	0.1	1.2	11.5
1958	8.6	1.0	9.6	1.1	-	1.1	10.7
1959	7.2	0.3	7.5	0.8	-	0.8	8.3
1960	6.6	0.1	6.7	0.8	-	0.8	7.5
1961	7.5	-	7.5	0.8	0.1	0.9	8.4
1962	7.8	-	7.8	1.0	0.1	1.1	8.9
1963	8.8	-	8.8	0.8	0.1	0.9	9.7
1964	8.6	-	8.6	1.0	0.1	1.1	9.7
1965	8.3	-	8.3	1.0	0.1	1.1	9.4
1966	8.1	-	8.1	1.0	0.1	1.1	9.2
1967	7.8	-	7.8	1.0	0.1	1.1	8.9
1968	5.1	-	5.1	0.7	0.1	0.8	5.9
1969/70	5.8	-	5.8	..	..	1.0	6.8
1970/71	6.3	-	6.3	..	..	1.2	8.0
1971/72	9.7	-	9.7	..	..	1.2	10.9
1972/73	9.9	-	9.9	..	..	1.2	11.1
1973/74	7.0	-	7.0	..	..	1.1	8.1
1974/75	8.1	-	8.1	..	..	1.0	9.1

**Source:** Bibliography Item (27) 1935-1967 and (8) 1968-1975.

**Notes:** .. Not Available. - Nil.

- (a) 1935-1967: New intake from civil life, excluding re-enlistments transfers from Reserves to effective strengths and transfers between Services. 1968-1975: Total intake from civil life, from re-enlistments, from transfers. 1935-1975: UK Enlistments only and excluding all locally enlisted personnel.
- (b) 1935-1938 Other ranks recruited between 1st April and 31st March each year. 1969-1975 All ranks recruited between 1st April and 31st March each year.
- (c) See Table 4:15 footnote (c).
- (d) 1935-1943 QARNNS and 1939, 1940 WRNS Recruitment unknown. Female Totals for these years therefore understate actual Female Civil Intake: For 1939-1940 this understatement is probably very significant.
- (e) QARNNS figures are estimates.

**Table 3:9 Part I**  
**Royal Navy (RN only) Recruitment by Type of Recruit\***  
**Selected Years 1962-1970**  
**000s and %**

Royal Navy Type of Recruit	1961-62		1965-66		1969-70	
	000s	%	000s	%	000s	%
<b>Normal Regular Engagements</b>						
(1) From Civil Life: No Prev. Service	1.53	25.2	1.73	25.9	1.07	25.4
(2) From Civil Life: Previous Service	0.08	1.3	0.08	1.2	0.10	2.3
(3) From National Servicemen	neg	0.1	-	-	-	-
(4) Juniors (Age 15 - 17½)	3.99	65.6	4.33	64.7	2.78	65.9
(5) Artificer Apprentices	0.47	7.8	0.55	8.2	0.27	6.4
<b>Total Males Recruited</b>	<b>6.07</b>	<b>100</b>	<b>6.69</b>	<b>100</b>	<b>4.22</b>	<b>100</b>
<b>Women Recruits</b>						
(1) WRNS	0.84	-	0.95	-	0.82	-
(2) QARNNS Auxiliaries	0.05	-	0.13	-	0.15	-
<b>Total Women Recruits</b>	<b>0.89</b>	<b>-</b>	<b>1.08</b>	<b>-</b>	<b>0.97</b>	<b>-</b>

**Source:** Bibliography Item (8)

**Note:** \* Other Ranks Only.

**Table 3:9 Part II**  
**Royal Navy (Royal Marines Only) Recruitment by Type of Recruit\***  
**Selected Years 1962 - 1970**  
**000s and %**

Royal Marines Type of Recruit	1961-62		1965-66		1969-70	
	000s	%	000s	%	000s	%
<b>Normal Regular Engagements</b>						
(1) From Civil Life: No Prev. Service	0.74	72.4	0.71	73.0	0.57	64.8
(2) From Civil Life: Previous Service	0.01	0.7	0.01	1.2	0.02	2.5
(3) Juniors (Age 15 - 17½)	0.27	26.9	0.25	25.8	0.28	32.7
<b>Total RM Recruits</b>	<b>1.02</b>	<b>100</b>	<b>0.97</b>	<b>100</b>	<b>0.87</b>	<b>100</b>

**Source:** Bibliography Item (8)

**Note:** \* Other Ranks Only: All RM are males.

Table 4:1 (Also Table 2:3)

UK Army From 1892/1900 - 1975/76

Actual Strength 1892/1900 - 1975/76 (Vote A) Strength

UK and Indian Contingents to Other

Fin. Year Ending	Actual Strength	Vote A Maximum	Fin. Year Ending	Actual Strength	Vote A Maximum
1900	270820	413370	1946	3154500	-
1901	418472	503484	1947	2122870	3015000
1902	417580	523518	1948	936140	1210000
1903	367940	494328	1949	646420	850000
1904	302540	310211			
1905	297720	301657	1950	511630	550000
1906	291490	296308	1951	510550	522000
1907	273490	279131	1952	530020	527000
1908	259510	265937	1953	529200	555000
1909	256940	261155	1954	536150	554000
			1955	521880	549000
1910	255550	259200	1956	481430	523000
1911	258250	260084	1957	450870	485000
1912	259040	262284	1958	397800	443000
1913	258000	262486	1959	351950	383000
1914	251700	261497			
1915	1115500	2262296	1960	318000	351000
1916	2472900	3000000	1961	293330	317000
1917	3326500	5000000	1962	254010	283000
1918	3819500	5000000	1963	231440	252000
1919	3477600	5000000	1964	223200	241000
			1965	223200	229000
1920	1164600	2600000	1966	224000	237800
1921	464970	525000	1967	225500	239700
1922	348620	641000	1968	220500	237000
1923	241600	286357	1969	205520	224500
1924	220600	241909			
1925	216730	223564	1970	195220	210000
1926	219380	222779	1971	190500	201300
1927	215370	220943	1972	189700	193500
1928	215200	226723	1973	190500	198000
1929	200160	213544	1974	184000	198500
			1975	173000	188500
1930	201080	210487			
1931	194870	208815			
1932	198570	208573			
1933	198740	206811			
1934	200710	206792			
1935	201800	207165			
1936	202140	209754			
1937	199570	215924			
1938	198340	215945			
1939	205580	234806			
1940	203000	-			
1941	1995000	-			
1942	2273400	-			
1943	2624100	-			
1944	2915100	-			
1945	3083000	-			

Source: Tables 4:1 and 4:3

Notes: See Source Tables for details of coverage.

- Not Applicable.



Table 4:2

UK Army Strengths 1899/1900 - 1946/47 \*

Actual Strength and Maximum Allowable (Vote A) Strengths  
Indian Establishment only

Fin. Year Ending	Actual Strength (a,b)	Vote A (a) Maximum	Fin. Year Ending	Actual Strength	Vote A Maximum
1900	70120	73157	1925	60730	61964
1901	63470	73484	1926	60680	62179
1902	65020	73518	1927	60370	61543
1903	70440	74328	1928	59450	60223
1904	76540	74450	1929	61160	60044
1905	78220	74654	1930	60580	59987
1906	76990	75008	1931	59470	59915
1907	76990	75031	1932	60570	59773
1908	75510	75967	1933	59240	58111
1909	75440	76155	1934	59210	58093
1910	77050	76009	1935	59000	57665
1911	77250	75884	1936	56940	57554
1912	77340	75884	1937	57170	57524
1913	76200	75886	1938	55840	57045
1914	76700	75897	1939	45380	56806
1915	75000	75896	1940c	35000	46942
1916	70000	..	1941c	30000	-
1917	70000	..	1942c	25000	-
1918	65000	..	1943c	25000	-
1919	65000	..	1944c	20000	-
1920	65000	..	1945c	20000	-
1921	64970	..	1946c	18000	..
1922	67620	..	1947c	15000	..
1923	68100	71357	1948c	-	-
1924	66300	71109			

Source: Bibliography Items (1), (3) and (4)

Notes: \* See Text for Structure of the Regular Army

.. Not Available - Not Applicable.

(a) All personnel serving on the Indian Regimental Establishment of the Regular Army.

(b) 1899/1900 - 1913/14, 1923/24 - 1937/38 Monthly Averages April - March. 1914/15 - 1919/20 Estimates. 1920/21 - 1922/23 1st October each financial year. 1938/39 1st January 1939, 1939/40 - 1946/47 Estimates except 1945/46 30th June 1945.

(c) Although the 'Indian Establishment' nominally only ceased to exist from 1947/48 little data is available from 1940 on. The numbers quoted are estimates of the numbers of British personnel serving in India in non-UK establishments of the Army - i.e. either in the 'Indian Establishment' of the Regular (British) Army or in the Indian Army.

Table 4.2

UK Army Strengths 1899/1900 - 1974/1975\*

Actual Strengths and Maximum Allowable (Vote A) Strengths

UK Establishment only(a)

Fin. Year Ending	Actual Strength (a,b,c)	Vote A Maximum (a,c)	Fin. Year Ending	Actual Strength Cont'd	Vote A Cont'd
1900d	200700	339853	1940	223000	-
1901d	355000	430000	1941	1665000	-
1902d	352500	450000	1942	2247400	-
1903d	297500	420000	1943	2599100	-
1904	226000	235761	1944	2895100	-
1905	219500	227000	1945	2936000	-
1906	204500	221300	1946	3136500	-
1907	196500	204100	1947	2107870	3015000
1908	184000	190000	1948	986140	1210000
1909	181500	185000	1949	646420	850000
1910	181500	183200	1950	511630	550000
1911	181000	184200	1951	510550	522000
1912	181700	186400	1952	530020	527000
1913	181800	186600	1953	529200	555000
1914	175000	185600	1954	536150	554000
1915	1040500	2186400	1955	521880	549000
1916	2402900	3000000	1956	491430	523000
1917	3256500	5000000	1957	450870	485000
1918	3754500	5000000	1958	397800	443000
1919e	3412600	5000000	1959	351950	386000
1920	1099600	2600000	1960	318000	351000
1921	400000	525000	1961	283330	317000
1922	281000	641000	1962	254010	283000
1923	173500	215000	1963	231440	252000
1924	154300	170800	1964	223200	241000
1925	156000	161600	1965	223200	229000
1926	158700	160600	1966	224000	237800
1927	155000	159400	1967	225500	238700
1928	155750	166500	1968	220500	237000
1929	145000	153500	1969	205520	224500
1930	140500	150500	1970	195220	210000
1931	135500	148900	1971	190500	201600
1932	138000	148800	1972	189700	195500
1933	139500	148700	1973	190500	198000
1934	141500	148700	1974	184000	198500
1935	142800	149500	1975	173000	188500
1936	145200	152200			
1937	142400	158400			
1938	142500	168900			
1939	160500	228000			

For Footnotes and etc. See next page.

Table 4:3 (Continued)

Source: Bibliography Items (1), (4), (8), (10) and (27)

Notes: - Not Applicable (Vote A = As many as needed for these years).

- (a) All active personnel - including colonials and Indians - borne on UK Army Expenditure Votes and therefore serving in the British Regimental Establishments or Headquarters and miscellaneous establishments. Excludes all personnel serving in the Indian Regimental Establishment, which establishment is borne by India not by the UK.
- (b) 1899/1900 - 1913/14, 1921/22 - 1937/38 Monthly Average April - March. 1914/15 - 1919/20 Quarterly Average April - April. 1938/39 1st January, 1939. 1939/40 - 1945/46 June each financial year (Includes Nurses). 1920/21, 1946/47 - 1974/75 Estimated Average annual totals based on known maximum Strengths for each financial year. (1974/75 estimate).
- (c) Including all Supplementary Vote A Estimates.
- (d) Actual Strength excludes South African Colonials recruited during the S.A. War. In 1901/02 these averaged 60,280 and 1902/03 April - August 43,500. The force was then disbanded. No data is available for numbers before 1901/02.
- (e) Includes 291748 officers and men borne on the Army Vote A but serving as RAF Personnel.
- \* See Text for Structure of the Regular Army.



Table 4:4

Army Personnel: Strengths 1935-1975

By Males, Females and Nurses (000s)

(000s)				
Year	Army (Males)	Womens Royal Army Corps (Females)	QARANC <sup>a</sup> (Females)	Army Total
1935 <sup>b</sup>	203.1	-	1.2	204.3
1936	199.9	-	1.2	201.1
1937	196.5	-	1.2	197.7
1938	198.8	-	1.2	200.0
1939	240.5	16.3	1.2	258.0
1940	1656.2	31.5	7.3	1695.0
1941	2221.4	42.8	8.2	2272.4
1942	2468.1	140.2	10.8	2619.1
1943	2691.8	210.3	13.0	2915.1
1944	2742.4	199.0	14.6	2956.0
1945	2930.9	190.8	14.8	3136.5
1946	1128.9	60.1	6.6	1195.6
1947	773.5	29.5	2.9	805.9
1948 <sup>c</sup>	450.0	14.1	1.7	468.8
1949	395.4	9.8	0.8	406.0
1950	354.0	6.4	0.9	361.3
1951	426.8	6.1	1.5	434.4
1952	445.0	6.3	1.8	453.1
1953	435.1	7.1	2.1	444.3
1954	436.5	6.8	2.0	445.3
1955	415.7	5.8	1.8	423.3
1956	393.0	4.7	1.7	399.4
1957	361.0	4.4	1.7	367.1
1958	318.2	4.1	1.6	323.9
1959	287.4	4.6	1.6	293.6
1960	251.8	4.6	1.5	257.9
1961	217.4	4.7	1.5	223.6
1962	192.8	5.4	1.5	199.7
1963	181.1	5.1	1.6	187.8
1964	185.5	4.9	1.6	192.0
1965	187.3	4.9	1.6	193.8
1966	187.5	4.7	1.6	193.8
1967	189.0	4.7	1.6	195.3
1968	181	4.3	1.5	187.0
1969	172	4.0	1.4	177.5
1970	169	3.8	1.4	174.5
1971	169	4.2	1.4	174.5
1972	173	4.6	1.4	179.0
1973	174	4.4	1.4	180.0
1974	166	..	5.8	171.8
1975	161	..	5.7	166.7

Source: Bibliography Items (8) and (27)

Notes: .. Not Available.  
- Not Applicable.

- (a) QARANC Column includes Queens Army Schoolmistresses 1935-1954.  
 (b) Actual Strengths including Locally Enlisted Personnel 1935-1938 at 31st March, 1939-1947 at 30th June, 1935-1945 and 1968-1973 QARANC figures are estimates.  
 (c) Actual Strengths excluding all Locally Enlisted Personnel except those whose documents are held in the UK at 30th June each year 1948-1975.

Table 4:5

## UK Army Strengths by Nature of Establishments: Vote A Estimates

Part I 1899/1900 - 1939/40

UK Establishment only(a)

Fin. Year Ending	UK Regimental Establishment					Total Regi- mental Estb.(d)	Staff & Depts. & Misc. Estb.(e)	Total Vote A
	Regular British Troops	Regular Colonial Troops(b)	Regular Temporary Troops	Total Regular Troops	Special Numbers(c)			
1900	166375	9934	-	176309	155000	331309	8544	339853
1901	191662	12190	-	203852	217551	421403	8597	430000
1902	196476	14435	-	210911	230200	441111	8889	450000
1903	197213	12837	-	210050	200300	410350	9650	420000
1904	197389	14086	-	211475	14200	225675	10086	235761
1905	192697	14075	-	206772	10000	216772	10228	227000
1906	197366	12762	-	210128	-	210128	11172	221300
1907	180458	12491	-	192949	-	192949	11151	204100
1908	169723	9598	-	179321	-	179321	10679	190000
1909	169114	8451	-	177565	-	177565	7435	185000
1910	168391	8604	-	176995	-	176995	6205	183200
1911	170083	8580	-	178663	-	178663	5537	184200
1912	171939	8871	-	180810	-	180810	5590	184400
1913	172082	8871	-	180953	-	180953	5647	186600
1914	168868	8765	-	177633	2300	179933	5667	185600
1915	169500	8771	-	178271	2300	2180571	5829	2186400
.....	.....	.....	.....	.....	.....	.....	.....	.....
1921	222459	105575	-	328034	186368	514402	10598	525000
1922	191532	84200	-	275732	55673	631405	9595	641000
1923	147312	5474	55295	208081	-	208081	6919	215000
1924	147082	3593	2171	152846	10500	163346	7454	170800
1925	144597	3343	1565	149505	4100	153605	7995	161600
1926	143168	3286	1881	148335	4000	152335	8265	160600
1927	142432	3426	2027	147885	3600	151485	7915	159400
1928	140360	4287	1999	146646	12000	158646	7854	166500
1929	139052	2778	1046	142876	2500	145376	8124	153500
1930	138469	2268	1064	141801	500	142301	8199	150500
1931	137244	2269	1323	140836	-	140836	8064	148900
1932	137793	2222	1036	141051	-	141051	7749	148800
1933	137737	2224	1278	141239	-	141239	7461	148700
1934	138023	2218	1259	141500	-	141500	7200	148700
1935	139039	2231	1055	142325	-	142325	7175	149500
1936	141033	2574	1124	144731	-	144731	7469	152200
1937	144383	2647	3578	150608	-	150608	7792	158400
1938	155255	3766	1093	160114	-	160114	8786	168900
1939	154281	5249	779	160309	-	218309	9691	228000
1940	163001	9228	196	172425	-	*	13275	*
.....	.....	.....	.....	.....	.....	.....	.....	.....

Source: Bibliography Items (3), (4).

Notes: (a) All Indian Estb. personnel are Regimental. Thus a similar table to this one can be produced for the Total (UK + Indian) Estb. by adding in the Indian Estb. totals shown in table 4:2. (b) i.e. Locally Enlisted Personnel.

(c) In early years, irregular recruits (some colonials) for the duration of the S.African, China and Somaliland Wars. Post WW1 Mainly Indians 'borrowed' from the Indian Establishment for duties in the Middle and Far East.

(d) Including supplementary estimates of 2,000,000 in 1914/15, 300,000 in 1921/22 (Coal strike-breaking) and 58,000 in 1938/39.

(e) Also Permanent Staff of the Reserve and Volunteer Forces.

\* No Vote A Maximum in 1939/40.

- Not Applicable or zero.

Table 4:5 (Continued)

UK Army Strengths by Nature of Establishments: Vote A Estimates  
Part II 1946/47 - 1974/75(a)

Fin. Year Ending	Regular British Troops	Colonial & Gurkha Troops(b)	Other Non-UK Troops(c)	Total Regular Troops	Misc. Special Numbers(d)	Total Vote A
1946	..	..	..	..	..	..
1947	1420400	622800	228800	2272000	743000	3015000
1948	854200	177600	101700	1171500	38500	1210000
1949	534400	153100	30400	717900	132100	850000
1950	426300	84400	8000	518700	31300	550000
1951	387000	71200	400	458600	63400	522000
1952	448900	67700	400	517000	10000	527000
1953	467900	80700	400	549000	6000	555000
1954	465600	78600	400	544600	9400	554000
1955	464450	74800	400	439650	9350	549000
1956	446350	67300	400	514050	8950	523000
1957	423500	52850	600	477000	8000	485000
1958	387200	47200	600	435000	8000	443000
1959	346800	30400	800	378000	8000	386000
1960	314600	29700	700	345000	6000	351000
1961	280100	31200	700	312000	5000	317000
1962	241500	34800	700	277000	6000	283000
1963	214100	35200	700	250000	2000	252000
1964	207600	32700	700	241000	-	241000
1965	203600	24600	800	229000	-	229000
1966	207200	29800	800	237800	-	237800
1967	206550	31350	800	238700	-	238700
1968	205450	30850	700	237000	-	237000
1969	200450	23350	700	224500	-	224500
1970	188350	20850	800	210000	-	210000
1971	182850	18200	550	201600	-	201600
1972	180750	14200	550	195500	-	195500
1973	188800	8600	600	198000	-	198000
1974	188950	8850	700	198500	-	198500
1975	178850	8950	700	188500	-	188500

Source: Bibliography Items (3), (10).

Notes: (a) UK Establishment only. For Indian Establishment 1946/47 see Table 4:2

(b) i.e. Locally Enlisted Personnel.

(c) Early Years, Polish and Dominion troops. From 1950/51 Commonwealth troops serving in the UK only.

(d) Personnel on Release (Terminal) leave. Also supplementary estimate of 65000 in 1946/47 and 55000 in 1950/51.

.. Data for 1940/41 - 1945/46 Not Available.

- Not Applicable or zero.



Table 4:6

Army Personnel: Strengths 1948-1975<sup>(a)</sup>By Male Regulars, National Servicemen and Females  
(000s) at 1st April each year

(000s)

Year	Army (Male Regulars)	Army (Nat. Service)	Army (Females)	Army Total
1946				
1947				
1948				
1949 <sup>b</sup>	182.4	221.4	11.9	415.7
1950 <sup>b</sup>	184.3	182.2	9.2	375.7
1951	202.2	223.5	7.5	433.2
1952	214.8	224.0	7.9	446.7
1953	211.3	228.0	9.1	448.4
1954	216.9	221.2	8.8	446.9
1955	223.8	205.2	8.0	437.0
1956	198.9	202.6	6.5	408.0
1957	194.6	174.3	6.3	375.2
1958	178.0	144.7	5.7	328.4
1959	172.9	125.0	6.0	303.9
1960	160.2	98.1	6.0	264.3
1961	160.3	64.8	6.2	231.3
1962	170.4	25.8	6.7	202.9
1963	181.2	2.6	6.8	190.6
1964	182.9	-	6.5	189.4
1965	187.1	-	6.6	193.7
1966	187.1	-	6.5	193.6
1967	189.7	-	6.5	196.2
1968	183.4	-	6.0	189.4
1969	173.1	-	5.4	178.5
1970	168.6	-	5.3	173.9
1971	167.9	-	5.5	173.4
1972	172.4	-	5.9	178.3
1973	174.1	-	5.8	179.9
1974 <sup>b</sup>	165.9	-	5.8	171.7
1975 <sup>b</sup>	160.8	-	5.7	166.5

Source: Bibliography Items (6), (7), (8).

Notes: (a) Excludes Locally Enlisted Personnel.

(b) Estimates in whole or part.

- Not Applicable.

UK Army Officer/Men Splits by Vote A Estimates  
Part I UK and Indian Establishments 1899/1900 - 1939/40

Fin. Year Ending	UK Reg. Estb.		Indian Reg. Estb.		Total Assigned Reg. Estb.			Other Reg. Troops (a) Os + ORs	Non-Reg. Estb. (b) Os + ORs	Vote A Total
	Offs	Ranks	Offs	ORs	Offs	ORs	Os + ORs			
1900	6670	169339	2599	70558	9269	240197	249466	155000	8544	413010
1901	7722	196130	2924	70560	10646	266690	277336	217551	8597	503484
1902	8077	202824	2932	70586	11009	273410	284419	230200	8899	523518
1903	8085	201965	2944	71384	11029	273349	284378	200300	9650	494328
1904	8142	203333	2956	71494	11098	274827	285925	14200	10086	310211
1905	8143	198629	2957	71700	11100	270329	281429	10000	10228	301657
1906	8057	202071	3008	72000	11065	274071	285136	-	11172	296308
1907	7838	185111	3008	72023	10846	257134	267980	-	11151	279131
1908	7689	171632	3124	72843	10813	244475	255288	-	10679	265967
1909	7688	169877	3121	73034	10809	242911	253720	-	7435	261155
1910	7797	169198	3115	72894	10912	242092	253004	-	6205	259209
1911	7776	170887	3045	72839	10821	243726	254547	-	5537	260084
1912	7803	173007	3045	72839	10848	245846	256694	-	5590	262284
1913	7808	173145	3031	72855	10839	246000	256839	-	5647	262486
1914	7812	169821	3045	72852	10857	242673	253530	2300	5667	261497
1915c	7894	170377	3044	72852	10938	243229	254167	2300	5829	262296
....	....	.....	....	.....	.....	.....	.....	....	....	.....
1923	8026	144760	3340	68017	11366	212777	224143	55295	6919	286357
1924	7890	142785	3492	67617	11382	210402	221784	12671	7454	241909
1925	7645	140295	3331	58633	10976	198928	209904	5665	7995	223564
1926	7563	138891	3283	58896	10846	197787	208633	5881	8265	222779
1927	7592	138266	3232	58311	10824	196577	207401	5627	7915	220943
1928	7457	137190	3157	57066	10614	194256	204870	3999	7854	226723
1929	7316	134514	3022	57022	10338	191536	201874	3546	8124	213544
1930	7315	133422	3023	56964	10338	190386	200724	1564	8199	210487
1931	7217	132296	3013	56902	10230	189198	199428	1323	8064	208815
1932	7267	132748	2977	56796	10244	189544	199788	1036	7749	205596
1933	7256	132705	2928	55163	10184	187888	198072	1278	7461	206811
1934	7252	132989	2924	55169	10176	188158	198334	1259	7200	206793
1935	7299	133971	2943	54722	10242	188693	198935	1055	7175	207165
1936	7395	136212	2904	54650	10299	190862	201161	1124	7469	209754
1937	7555	139475	2915	54609	10470	194084	204574	3578	7792	215924
1938	8087	150934	2932	54113	11019	205047	216066	1093	8786	225945
1939	8216	151214	2933	53873	11149	205087	216236	58779	9691	284806
1940	8402	163827	2445	42811	10847	206638	217485	*	13275	*
....	....	.....	....	.....	.....	.....	.....	....	....	.....

Table 4:7 (Continued)

Source: Bibliography Item (3)

Notes: (a) Supplementary Estimates, Temporary War and Expedition numbers and regular temporary troops. All these personnel form part of the UK (i.e. British) Establishment.

(b) Staff and Departments and Miscellaneous Establishments including the permanent staff of the Reserve and Volunteer forces. All form part of the UK (i.e. British) Establishment.

(c) See Table 4:11 for an Analysis of the WW1 period.

\* There was no maximum to the supplementary and total Vote A for this year.

- Not Applicable or zero.



Table 4:8

UK Army Officer/Men Splits by Vote A Estimates

Part II UK Establishments only 1899/1900 - 1939/40

Fin. Year Ending	Regular Reg. Troops(a)		Staff etc(b)		Total Regular Personnel			Irregular Troops(c)	Total Vote A
	Offs	ORs	Offs	ORs	Offs	ORs	Offs + ORs	Offs + ORs	
1900	8670	169639	1618	6926	8288	176565	184853	155000	339853
901	7722	196130	1643	6954	9365	203084	212449	217551	430000
1902	8077	202824	1668	7231	9745	210055	219800	230200	450000
1903	8085	201965	1890	7760	9975	209725	219700	200300	420000
1904	8142	203333	1979	8107	10121	211440	221561	14200	235761
1905	8143	198629	2091	8137	10234	206766	217000	10000	227000
1906	8057	202071	2130	9042	10187	211113	221300	-	221300
1907	7838	185111	2197	8954	10035	194065	204100	-	204100
1908	7689	171832	2068	8611	9757	180243	190000	-	190000
1909	7688	169877	2076	5359	9764	175236	185000	-	185000
1910	7797	169198	1962	4243	9759	173441	183200	-	183200
1911	7776	170887	1964	3573	9740	174460	184200	-	184200
1912	7803	173007	1956	3634	9759	176641	186400	-	186400
1913	7808	173145	1992	3655	9800	176800	186600	-	186600
1914	7812	169821	2042	3625	9854	173446	183300	2300	185600
1915	7894	170377	2138	3691	10032	174068	184100	2002300	2186400
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1921	16018	312016	4211	6387	20229	318403	338632	186368	525000
1922	14258	261474	3772	5823	18030	267297	285327	355673	641000
1923	12872	195209	2342	4577	15214	199786	215000	-	215000
1924	8014	144832	2226	5228	10240	150060	160300	10500	170800
1925	7725	141780	2137	5858	9862	147638	157500	4100	161600
1926	7649	140686	2116	6149	9765	146835	156600	4000	160600
1927	7606	140279	1925	5990	9531	146269	155800	3600	159400
1928	7467	139179	1946	5908	9413	145087	154500	12000	166500
1929	7326	135550	1929	6195	9255	141745	151000	2500	153500
1930	7325	134476	1932	6267	9257	140743	150000	500	150500
1931	7257	133579	1907	6157	9164	139736	148900	-	148900
1932	7277	133774	1895	5854	9172	139628	148800	-	148800
1933	7266	133973	1854	5607	9120	139580	148700	-	148700
1934	7402	134098	1847	5353	9249	139451	148700	-	148700
1935	7449	134876	1852	5323	9301	140199	149500	-	149500
1936	7545	137186	1916	5553	9461	142739	152200	-	152200
1937	7782	142826	1966	5826	9748	148652	158400	-	158400
1938	8237	151877	2111	6675	10348	158552	168900	-	168900
1939	8366	151843	2372	7419	10738	159262	170000	58000	228000
1940	8543	163882	2895	10380	11438	174262	185700	*	*
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

**Source:** Bibliography Item (3)

- Notes:**
- (a) Including Regular Temporary Troops as numerated in Table 4:5
  - (b) Staff and Departments and Miscellaneous Establishments including permanent personnel of the Reserve and Volunteer Forces.
  - (c) Supplementary Estimates, Temporary War and Expedition numbers and troops 'borrowed' from the Indian Establishment.
  - \* There was no Vote A maximum for this year.
  - Not Applicable or zero.

Table 4:9

## UK Army Officer/Men Splits by Vote A Estimates

## Part III UK Establishment 1946/47 - 1974/75

Fin. Year Ending	UK Forces(a)		L.E.P.s(b)		Total Regular Forces			Misc. Os + ORs(c)	Total Vote A
	Offs	ORs	Offs	ORs	Offs	ORs	Os + ORs		
1947	111800	1308600	19100	603700	130900	1912300	2043200	971800	3015000
1948	67700	786700	2600	175000	70300	961700	1032000	178000	1210000
1949	47000	487800	1100	152000	48100	639800	687900	162100	850000
1950	38400	388300	400	84000	38800	472300	511100	38900	550000
1951	35700	351700	200	71000	35900	422700	458600	8400	467000
1952	39600	409700	200	67500	39800	477200	517000	10000	527000
1953	36750	431550	200	80500	36950	512050	549000	6000	555000
1954	36850	429150	250	78350	37100	507500	544600	9400	554000
1955	37400	427450	250	74550	37650	502000	539650	9350	549000
1956	36950	409800	200	67100	37150	476900	514050	8950	523000
1957	36350	387800	250	52600	36600	440400	477000	8000	485000
1958	35100	352700	300	46900	35400	399600	435000	8000	443000
1959	32600	315000	400	30000	33000	345000	378000	8000	386000
1960	28700	286600	400	29300	29100	315900	345000	6000	351000
1961	27300	253500	400	30800	27700	284300	312000	5000	317000
1962	25300	216900	500	34300	25800	251200	277000	6000	283000
1963	23600	191200	400	34800	24000	226000	250000	2000	252000
1964	21500	186800	400	32300	21900	219100	241000	-	241000
1965	21600	182800	200	24400	21800	207200	229000	-	229000
1966	21850	186150	400	29400	22250	215550	237800	-	237800
1967	22050	185300	400	30950	22450	216250	238700	-	238700
1968	22100	184050	500	30350	22600	214400	237000	-	237000
1969	21700	179450	150	23200	21850	202650	224500	-	224500
1970	20850	168300	150	20700	21000	189000	210000	-	210000
1971	20020	163380	130	18070	20150	181450	201600	-	201600
1972d	19610	161690	60	14140	19670	175830	195500	-	195500
	20510	160790	60	14140	20570	174930	195500	-	195500
1973	20160	169240	30	8570	20190	177810	198000	-	198000
1974	20265	169385	35	8815	20300	178200	198500	-	198500
1975	20365	159185	35	8915	20400	168100	188500	-	188500

**Source:** Bibliography Item: (3), (10).

- Notes:**
- (a) UK Citizens. Also included here are small numbers (less than 1000) of Commonwealth Armed Forces personnel who are serving in the UK Army in the UK.
  - (b) Locally Enlisted Personnel: Mainly Indians and Gurkhas.
  - (c) Personnel on Terminal (release) leave and, in earlier years, Polish and other Miscellaneous Armed Forces.
  - (d) A new rank sub-division - Officers Designate - was introduced during 1971/72. From 1972 lower line Officers Designate are included in the Officers category. Previously such personnel were classed as Other Ranks.
- Zero.

Table 4:10

UK Army Personnel Vote A Strength 1948/49 - 1974/75

UK Personnel only, by Branches of the Service, Officers and Men

Fin. Year Ending	Army Males			WRAC(a)		QARANC(b)		Total Os + ORs *
	Offs	ORs	Os + ORs	Offs	ORs	Offs	ORs	
1946								
1947								
1948								
1949	44100	473400	517500	1000	14200	1700	-	534400
1950	36700	376800	413500	700	11300	800	-	426300
1951	33800	344000	377800	800	7500	900	-	387000
1952	37800	403200	441000	550	5650	1050	650	448900
1953	35100	423400	458500	400	7050	1050	900	467900
1954	35250	420000	455250	450	7900	950	1050	465600
1955c	35600	419600	455200	450	Offs 6650	1150	ORs 1000	464450
1956	35300	402900	438200		1450		6700	446350
1957	34500	382000	416500		1450		5600	423550
1958	33200	347500	380700		1500		5000	387200
1959	30700	310200	340900		1400		4500	346800
1960	27000	281500	308500		1200		4900	314600
1961	25600	248000	273600		1200		5300	280100
1962	23600	211500	235100		1200		5200	241500
1963	22000	185500	207500		1100		5500	214100
1964	20000	180000	200000	300	5700	700	900	207600
1965	20100	176500	196600	300	5100	700	900	203600
1966	20300	179700	200000	300	5200	750	950	207200
1967	20600	179100	199700	350	4850	700	950	206550
1968	20800	178400	199200	350	4300	600	1000	205450
1969	20400	173600	194000	330	4500	620	1000	200450
1970	19550	163000	182550	300	4000	600	900	188350
1971	18850	158650	177500	300	3650	570	830	182850
1972d	18500	156800	175300	280	3740	530	900	180750
	19380	155920	175300	300	3720	530	900	180750
1973	19000	163800	182800	300	4150	560	990	188800
1974	18900	163850	182750	315	4135	650	1100	188950
1975	19000	153600	172600	315	4185	650	1100	178850

Source: Bibliography Item: (3), (10)

Notes: (a) Womens Royal Army Corps.

(b) Queen Alexandra's Royal Army Nursing Corps.

(c) 1955 - 1963, No separate WRAC and QARANC figures available.

(d) 'Officers Designate', introduced as a category in this year, were classed as Officers from 1972 (lower line) on. Previously such personnel were classed as Other Ranks (1972 upper line).

\* cf Table 4:5 Part II, Col. 1.



Table 4:11

UK Army Personnel: Quarterly Analysis 1913-1921

Actual Strengths: UK+Indian Establishments: Officers and Men

Year Quarter		Regimental Establishment						Staff Depts. Misc.	Total (b) UK + India Estab.
		Regulars		Territorials(a)	Total Regm. Strength				
		Offs	ORs	ORs	Offs	ORs	Os + ORs		
1913	Oct.	10778	236472	..	10778	236472	247250	c5750	253000
	Jan.	10741	234698		10741	234698	245439		
1914	April	10861	233607		10861	233607	244468		
	July	10808	233452		10808	233452	244260		
	Oct.	33393	927077	366902	33393	1293979	1327372	c3116	1330488
1915	Jan.				54534	1710487	1765021		
	April				68592	1912453	1981045		
	July				80700	2201220	2281920		
	Oct.	92578	1646665	736521	92578	2383186	2475764	c4000	2479764
1916	Jan.				103910	2620705	2724615		
	April				109283	2771954	2881237		
	July				113129	3075946	3189075		
	Oct.	110786	2244109	988902	110786	3233011	3343797	c9000	3352797
1917	Jan.				119585	3361883	3481468		
	April				128765	3563375	3692140		
	July				136388	3669006	3805394		
	Oct.	143533	2954965	784519	143533	3739484	3883017	c16000	3883017
1918	Jan.				154777	3732872	3887649		
	April				150188	3599060	3749248		
	July				148404	3665977	3814381		
	Oct.	147738	3690527	(796784)*	147738	3690527	3838265	c18000	3856265
1919	Jan.				141592	3534881	3676473		
	April				109285	2160547	2269832		
	July				75704	1379495	1455179		
	Oct.	54366	1010377	-	54366	1010377	1064743	c10500	1075243
1920	Jan.	31896	553218		31896	553218	584914		
	April	22129	381056		22129	381056	403185		
	July	19203	307400		19203	307400	326603		
	Oct.	18777	415948	(62158)	18777	415948	434725	c9200	443925
1921	Jan.	18052	400580		18052	400580	418632		
	April	16132	353381		16132	353381	369513		
	July	14911	301914		14911	301914	316825		
	Oct.	14585	282363	(134753)	14585	282363	296948	c9200	306148

Source: Bibliography Item (4).

Notes: (a) The Territorial force was mobilised in August 1914 and incorporated into the Army in 1918. Thus only between those dates did it constitute an additional force. Before Oct. 1914 and after Oct. 1917 numbers shown in the Territorials Column are for illustrative purposes only. They are not included in the Regimental totals column. The territorial force was reconstituted as a reserve force in Oct. 1920. During 1914 - 1917 all Territorials were classed (in the data source) as Other Ranks, but the reconstituted Territorial force of Oct. 1920 includes some Officers.

(b) This total is similar to that shown (for actual strengths) in Table 4:1. (The Total in Table 4:1 is derived from the same data source as that given here for the 1915 - 1920 period).

\* The number of Territorials 'Recruited' into the Regular Army between Oct. 1917 and Oct. 1918 (See Note (a)).

- Not Applicable

.. Not Available.

Table 4:11

Army Personnel: Quarterly Analysis 1939-1945

Actual Strengths: UK Establishments, Males and Females

Year	Quarter	ARMY			All Nurses (d)
		Males (a)	Females (b)	Total (c)	
1939	September	897000	..	..	2400
	December	1128000	23900	1152000	7000
1940	March	1361000	..	..	8200
	June	1650000	31500	1681000	7600
	September	1888000	36100	1924000	7900
	December	2075000	36400	2111000	8200
1941	March	2166000	37500	2203000	9000
	June	2221000	42800	2264000	10000
	September	2292000	65000	2357000	10400
	December	2340000	85100	2425000	10900
1942	March	2397000	111100	2508000	11900
	June	2453000	140200	2593000	13000
	September	2494000	162200	2656000	13900
	December	2566000	180700	2747000	14600
1943	March	2628000	195300	2823000	15500
	June	2673000	210300	2883000	16400
	September	2679000	212500	2891000	17500
	December	2680000	207500	2887000	18400
1944	March	2680000	206200	2886000	18300
	June	2720000	199000	2919000	19500
	September	2741000	198200	2929000	20300
	December	2760000	196400	2956000	21100
1945	March	2802000	195300	2997000	21500
	June	2920000	190800	3111000	21400

Source: Bibliography item (40)

- Notes:
- (a) Army Males including men locally enlisted abroad until September 1941, but not thereafter.
  - (b) Auxilliary Territorial Service: excludes women enlisted abroad.
  - (c) Rounded to the nearest 1000.
  - (d) RN, RAF and Army Nursing Services and Queens Army Schoolmistresses. Most are Army personnel. (Cf Tables 3.2, 4.4 and 5.2)
  - .. Not Available.

Table 4:12

UK Army Vote A Officer/Men Splits, including Men Sub Divisions

Part I UK Regular Regimental Establishment Only 1899/1900 - 1939/40 \*

Fin. Year Ending	Total Reg. Offs	Regimental Other Ranks				Total ORs	Total Reg. Os + ORs (e)
		W.O. (a)	Serj. (b)	Drummer (c)	Men (d)		
1900	6670	920	11999	2762	153958	169639	176309
1901	7722	1087	13771	3185	178087	196130	203852
1902	8077	1119	14206	3335	184164	202824	210911
1903	8085	1134	14176	3336	183319	201965	210050
1904	8142	1166	14315	3363	184489	203333	211475
1905	8143	1174	14459	3332	179664	198629	206772
1906	8057	1139	14087	3290	183555	202071	210128
1907	7838	1122	13703	3192	167094	185111	192949
1908	7689	1086	13404	2941	154201	171632	179321
1909	7688	1146	14083	3490	151158	169877	177565
1910	7797	1116	14403	3756	149923	169198	176995
1911	7776	1143	14732	3734	151278	170887	178663
1912	7803	1083	14622	3734	153568	173007	180810
1913	7808	1094	14613	3702	153736	173145	180953
1914	7812	1098	14604	3678	150441	169821	177633
1915	7894	1099	14637	3670	150971	170377	178271
....	....	....	....	....	....	....	....
1921	16018	..	..	..	..	312016	328034
1922	14258	..	..	..	..	261474	275732
1923	8026	..	..	..	..	144760	152786
1924	7890	..	..	..	..	142785	150675
1925	7645	..	..	..	..	140295	147940
1926	7563	..	..	..	..	138891	146454
1927	7592	..	..	..	..	138266	145858
1928	7457	..	..	..	..	137190	144647
1929	7316	2748	8198	2194	121374	134514	141830
1930	7315	2751	8240	2173	120258	133422	140737
1931	7217	2335	8242	2198	119121	132296	139513
1932	7267	2767	8287	2202	119492	132748	140015
1933	7256	2752	8292	2200	119461	132705	139961
1934	7252	2777	8359	2191	119662	132989	140241
1935	7299	2810	8480	2198	120483	133971	141270
1936	7395	2869	8730	2200	122413	136212	143607
1937	7555	2939	9018	2217	125301	139475	147030
1938	8087	3127	10013	2291	135503	150934	159021
1939	8216	..	..	..	..	151214	159430
1940	8402	....	....	....	....	163827	172229
....	....	....	....	....	....	....	....

Source: Bibliography Item (3)

Notes: (a) Warrant Officers.

(b) Sergeants.

(c) Trumpeters, Drummers and Buglers.

(d) Rank and File.

(e) cf Table 4:7 Cols. (1) + (2).

\* UK Establishment British and Colonial Regimental forces on a permanent footing. Excludes Regular Temporary Troops (see (e)) and Staff and Departments and Miscellaneous Establishments.

.. Not Available.



Table 4:12(Continued)

UK Army Vote A Officer/Men Splits, including Men Sub Divisions

Part II Indian Regimental Establishment Only 1899/1900 - 1914/15

Fin. Year Ending	Total Reg. Offs <sup>+</sup>	India Estb. Other Ranks				Total ORs <sup>+</sup>	Total Reg. Os + ORs*
		W.O.	Serj.	Drummer	Men		
1900	2599	140	3735	1104	65579	70558	73157
1901	2924	140	3736	1105	65579	70560	73484
1902	2932	140	3743	1110	65593	70586	73518
1903	2944	141	3778	1119	66346	71384	74328
1904	2956	142	3785	1171	66396	71494	74450
1905	2957	142	3808	1171	66579	71700	74657
1906	3008	150	3789	1186	66875	72000	75008
1907	3008	150	3817	1181	66875	72023	75031
1908	3124	151	3933	1133	67626	72843	75967
1909	3121	153	4042	1135	67704	73034	76155
1910	3115	156	4033	1133	67572	72894	76009
1911	3045	156	3973	1138	67572	72839	75884
1912	3045	156	3973	1138	67572	72839	75884
1913	3031	163	3937	1138	67617	72855	75886
1914	3045	162	3946	1138	67606	72852	75897
1915	3044	162	3946	1138	67606	72852	75896

Source: Bibliography Item (2)

Note: \* cf Table 4:2 Col. 2.

+ cf Table 4:7 Part I, Cols, 3 and 4

Table 4:12 (Continued)

Part III UK + Indian Regimental Establishments 1899/1900 - 1914/15

Fin Year Ending	Total Reg. Offs*	UK + India Estb. Other Ranks				Total ORs	Os + ORs*
		W.O.	Serj.	Drummer	Men		
1900	9269	1060	15735	3866	219537	240197	249466
1901	10646	1227	17507	4290	243666	266690	277336
1902	11009	1259	17949	4445	249757	273410	284419
1903	11029	1275	17954	4455	249665	273349	284378
1904	11098	1308	18100	4534	250885	274827	285925
1905	11100	1316	18267	4503	246243	270329	281429
1906	11065	1289	17876	4476	250430	274071	285136
1907	10846	1272	17520	4373	233969	257134	267980
1908	10813	1237	17337	4074	221827	244475	255288
1909	10809	1299	18125	4625	218862	242911	253720
1910	10912	1272	18436	4889	217495	242092	253004
1911	10821	1299	18705	4872	218850	243726	254547
1912	10848	1239	18595	4872	221140	245846	256694
1913	10839	1257	18550	4840	221353	246000	256839
1914	10857	1260	18550	4816	218047	242673	253520
1915	10938	1261	18583	4808	218577	243229	254167

Source: Bibliography Item (3)

Note: \* cf Cols. (5 - 7) of Table 4:7 Part I

**Table 4:12 (Continued)**

**Part IV UK Establishment: Staff and Departments and Miscellaneous Establishments  
Officer/Men Splits including Men Sub-Divisions 1899/1900 - 1914/15**

Fin. Year Ending	Total Non-Reg. Offs <sup>+</sup>	UK Non-Reg. Establishment ORs				Total ORs <sup>+</sup>	Total Non-Reg. Os + ORs*
		W.O.	Serj.	Drummer	Men		
1900	1618	200	5356	1190	180	6926	8544
1901	1643	203	5374	1197	180	6954	8597
1902	1668	366	5398	1198	269	7231	8899
1903	1890	376	5874	1206	304	7760	9650
1904	1979	374	6034	1216	483	8107	10086
1905	2091	370	6050	1216	501	8137	10228
1906	2130	417	6504	1211	910	9042	11172
1907	2197	421	6482	1211	840	8954	11151
1908	2068	453	6362	1191	605	8611	10679
1909	2076	348	4117	297	597	5359	7435
1910	1962	324	3628	24	267	4243	6205
1911	1964	291	2990	25	267	3573	5537
1912	1956	274	3048	25	287	3634	5590
1913	1992	277	3058	25	295	3655	5647
1914	2042	266	3061	25	273	3625	5667
1915	2138	262	3066	25	338	3691	5829

**Source:** Bibliography Item

**Note:** \* cf Column 9 Table 4:7 Part I.

+ cf Columns 3 and 4 Table 4:8 Part II.

**Table 4:12 (Continued)**

**Part V UK Establishment Only Regular Regimental + Non-Regimental Personnel:<sup>+</sup>  
Officer Men Splits including Men Sub-Divisions 1899/1900 - 1914/15**

Fin. Year Ending	Total UK Estb. Offs.*	UK Reg. + Non-Reg. Estb. ORs				Total ORs*	Total UK Estb. Os + ORs*
		W.O.	Serj.	Drummer	Men		
1900	8288	1120	17355	3952	154138	176565	184853
1901	9365	1290	19145	4382	178267	203084	212449
1902	9745	1485	19604	4533	184433	210055	219800
1903	9975	1510	20050	4542	183623	209725	219700
1904	10121	1540	20349	4579	184972	211440	221561
1905	10234	1544	20509	4548	180165	206766	217000
1906	10187	1556	20591	4501	184465	211113	221300
1907	10035	1543	20185	4403	167934	194065	204100
1908	9757	1539	19766	4132	154806	180243	190000
1909	9764	1494	18200	3787	151755	175236	185000
1910	9759	1440	18031	3780	150190	173441	183200
1911	9740	1434	17722	3759	151545	174460	184200
1912	9759	1357	17670	3759	152855	176641	186400
1913	9800	1371	17671	3727	154031	176800	186600
1914	9854	1364	17665	3703	150714	173446	183300
1915	10032	1361	17703	3695	151309	174068	184100

**Source:** Bibliography Item (3)

**Notes:** \* cf Table 4:8 Part II Columns (5-7).

+ Excludes War Numbers. See Table 4:8 Part II Col. 8.

Table 4:13

UK Army Personnel, Expected Average Annual Strengths 1962/63 - 1974/75\*

UK Personnel Only: Branches of the Service Officer and Men Sub-Divisions.

Part I Total, Army Males, WRAC and QARANC

Fin. Year Ending	Senior Officers(a)	Junior Officers(b)	Total Officers	WOs + NCOs(c)	Privates etc(d)	Total Ranks	Total Os + ORs
1963	9533	11154	20687	72221	105709	177930	198617
1964	9460	10585	20045	70698	104338	175036	195081
1965	9696	10507	20203	73065	98437	171502	191705
1966	9681	10707	20388	74947	101467	176414	196802
1967	9832	10766	20598	75938	100230	176168	196766
1968	9929	10810	20739	74949	99826	174775	195514
1969	9344	10826	20170	80717	89368	170085	190255
1970	9120	10015	19135	76485	81120	157605	176740
1971	8730	9830	18560	76470	78005	154475	173035
1972e	8525	10315	18840	74295	77390	151685	170525
1973	8500	10255	18755	75470	83090	158560	177315
1974	8525	10130	18655	76800	81910	158710	177365
1975	8570	10075	18645	76130	72025	148155	166800

Source: Bibliography Item (3)

Notes: \* Not Actual Average strengths but forecasts of Average expected numbers made at the start of each financial year.

(a) General Officers, Brigadiers, Colonels, Lt. Colonels and Majors.

(b) Captains, Lieutenants and 2nd Lieutenants: From 1972, Also Officers Designate.

(c) Warrant Officers and Non Commissioned Officers.

(d) Privates, Apprentices and Boys.

(e) In 1972 a new category - Officers Designate - was introduced. Such personnel are classed as Junior Officers from 1972 but were previously included under Other Ranks. This explains the jump in Junior Officer numbers in 1972.



**Table 4:13 (Continued)**

**UK Army Personnel: Officer and Men Sub-Divisions by Branches of the Service**  
**Part II Male Army Personnel Only 1962/63 - 1974/75**

Fin. Year Ending	Field Officers*	Cols. Lt. Col. Major	Capt. Lt. 2nd Lt.	Offs. Desig.+	Total All Officers	WOs + NCOs	Privates Apps. Boys	Total Other Ranks	Total All Os + ORs
1963	399	8820	10480	-	19699	70445	101555	172000	191699
1964	395	8745	9920	-	19060	68790	100070	168860	187920
1965	395	8985	9780	-	19160	71205	94710	165915	185075
1966	395	8975	9950	-	19320	73025	97635	170660	189980
1967	400	9105	10110	-	19615	73955	96650	170605	190220
1968	395	9245	10155	-	19795	73330	93360	169690	189485
1969	375	8685	10210	-	19270	79195	85685	164880	184150
1970	375	8465	9420	-	18260	74865	78340	153205	171465
1971	370	8110	9250	-	17730	74960	75325	150285	168015
1972	370	7925	8850	900	18045	72895	74380	147275	165320
1973	360	7905	8785	855	17905	74010	79780	153790	171695
1974	345	7925	9085	395	17750	75280	78505	153785	171535
1975	340	7995	9050	365	17750	74455	68790	142325	160995

**Source:** Bibliography Item (3)

**Notes:** \* General Officers and Brigadiers.  
+ Previously classed as Other Ranks.

**Table 4:13 (Continued)**

**Part III Womens Royal Army Corps 1962/63 - 1974/75**

Fin. Year Ending	Senior Officers*	Capt. Lt. 2nd Lt.	Officers Designate+	Total All Officers	WOs + NCOs	Privates	Total Other Ranks	Total All Os + ORs
1963	123	145	-	268	1640	3465	5105	5373
1964	131	155	-	286	1755	3580	5335	5621
1965	103	203	-	306	1720	2985	4705	5011
1966	103	228	-	331	1765	3065	4830	5161
1967	104	215	-	319	1825	2790	4615	4934
1968	102	238	-	340	1475	2610	4085	4425
1969	92	213	-	305	1375	2845	4220	4525
1970	90	195	-	285	1445	2070	3515	3800
1971	85	210	-	295	1360	2005	3365	3660
1972	75	195	20	290	1275	2230	3535	3825
1973	75	200	20	295	1310	2490	3800	4095
1974	80	195	20	295	1350	2550	3900	4195
1975	70	200	20	290	1465	2445	3910	4200

**Source:** Bibliography Item (3)

**Notes:** \* Brigadiers, Colonels, Lt. Colonels and Majors.  
+ Previously Classed as Other Ranks.

Table 4:13 (Continued)

UK Army Personnel: Officers and Men Sub-Divisions by Branches of the Service  
 Part IV Queen Alexandra's Royal Army Nursing Corps 1962/63 - 1974/75

Fin. Year Ending	Senior Officers*	Capt. Lt. 2nd Lt.	Total All Officers	WOs + NCOS	Privates	Total Other Ranks	Total all Os + ORs
1963	191	529	720	136	689	825	1545
1964	189	510	699	153	688	841	1540
1965	213	524	737	140	742	882	1619
1966	208	529	737	157	767	924	1661
1967	223	441	664	158	790	948	1612
1968	187	417	604	144	856	1000	1604
1969	192	403	595	147	838	985	1580
1970	190	400	590	175	710	885	1475
1971	165	370	535	150	675	825	1360
1972	155	350	505	125	750	875	1380
1973	160	395	555	150	820	970	1525
1974	175	435	610	170	855	1025	1635
1975	165	440	605	210	790	1000	1605

Source: Bibliography Item (3)

Note: \* Brigadiers, Colonels, Lt. Colonels and Majors.

Table 4:14

Queen Alexandra's Imperial Military Nursing Services 1922/23 - 1938/39\*+

Fin. Year Ending	Maximum UK Establishment				Total UK Estb.	Total Indian Estb.	Total QAIMNS Estb.
	Principal Matrons(a)	Matrons(b)	Sisters	Nurses(c)			
1923	3	35	223	404	665	..	..
1924	2	24	132	248	406	..	..
1925	2	20	130	215	367	..	..
1926	2	20		339	361	..	..
1927	2	20	119	232	373	..	..
1928	2	18		357	377	224	601
1929	2	18		344	364	224	588
1930	2	18		349	369	224	593
1931	2	17		331	350	224	574
1932	2	18		355	375	224	599
1933	2	18		353	373	224	597
1934	2	18		353	373	224	597
1935	2	18		351	371	224	595
1936	2	18		359	379	224	603
1937	3	19		372	394	224	618
1938	3	19		374	396	224	620
1939	3	19		376	398	215	623
1940	3	21		526	550	227	777

Source: Bibliography Item (3)

Notes: \* QAIMNS Personnel do not form part of the Army Vote A (Maximum) Numbers.  
 + Including Queen Alexandra's Military Families Nursing Service.

(a) Includes 1 Matron-in-Chief each year.

(b) and Assistant Matrons

(c) and Assistant Nurses.

Table 4:15

Army Armed Forces: Recruitment Intake<sup>(a)</sup>  
Males and Females (000s)

Calendar Year <sup>(b)</sup>	Army Males			Army Females <sup>(d)</sup>			Army Total
	Regular <sup>(c)</sup>	Other <sup>(c)</sup>	Total	WRAC	QARANC	Total	
1935	24.6	0.8	25.4	-	-	-	25.4
1936	22.5	0.8	23.3	-	-	-	23.3
1937	26.1	0.9	27.0	-	-	-	27.0
1938	38.8	1.0	39.8	-	-	-	39.8
1939	36.8	273.8	310.6	10.4	..	10.4	321.0
1940	6.4	1125.5	1131.9	21.5	..	21.5	1153.4
1941	7.3	440.4	447.7	58.1	..	58.1	505.8
1942	5.0	426.6	431.6	114.9	..	114.9	546.5
1943	5.7	231.6	237.3	50.3	..	50.3	287.6
1944 <sup>e</sup>	10.0	241.9	251.9	19.8	3.1	22.9	274.8
1945 <sup>e</sup>	15.3	185.4	200.7	21.0	0.6	21.6	222.3
1946	32.6	169.5	202.1	6.6	0.3	6.9	209.0
1947	35.1	122.5	157.6	4.5	0.2	4.7	162.3
1948	28.6	101.2	129.8	3.8	0.1	3.9	133.7
1949	19.3	115.7	135.0	2.1	0.3	2.4	137.4
1950	28.5	121.0	149.5	2.4	0.5	2.9	152.4
1951	18.8	118.1	136.9	1.9	0.6	2.5	139.4
1952	42.9	127.5	170.4	3.0	0.7	3.7	174.1
1953	43.3	113.3	156.6	3.7	0.7	4.4	161.0
1954	35.3	110.3	145.6	2.6	0.5	3.1	148.7
1955	31.4	108.8	140.2	1.5	0.5	2.0	142.2
1956	36.1	124.6	160.7	1.9	0.6	2.5	163.2
1957	27.5	78.6	106.1	1.5	0.5	2.0	108.1
1958	31.0	70.1	101.1	2.0	0.5	2.5	103.6
1959	28.6	49.7	78.3	2.1	0.5	2.6	80.9
1960	20.9	50.6	71.5	2.0	0.5	2.5	74.0
1961	31.0	-	31.0	2.4	0.5	2.9	33.9
1962	36.4	-	36.4	2.8	0.6	3.4	39.8
1963	24.1	-	24.1	2.0	0.4	2.4	26.5
1964	30.6	-	30.6	2.3	0.3	2.6	33.2
1965	25.8	-	25.8	2.3	0.4	2.7	28.5
1966	25.8	-	25.8	2.3	0.5	2.8	28.6
1967	21.5	-	21.5	2.0	0.4	2.4	23.9
1968	17.1	-	17.1	1.9	0.4	2.3	19.4
1969/70	21.4	-	21.4	..	..	2.5	23.9
1970/71	24.3	-	24.3	..	..	2.6	26.9
1971/72	31.3	-	31.3	..	..	3.0	34.3
1972/73	26.5	-	26.5	..	..	2.4	28.9
1973/74	15.3	-	15.3	..	..	2.2	17.5
1974/75	24.8	-	24.8	..	..	2.3	27.1

Source: Bibliography Item (27) 1935-1967 and (8) 1968-1975.

Notes: .. Not Available. - Nil.

- (a) As Table 3:8 footnote (a). Except that 1935-1951 persons locally enlisted abroad are included and 1952-1967 Males locally enlisted abroad whose documents were held in the UK are included.
- (b) See Table 5:11 footnote (b).
- (c) Regulars = Regular and Short Service Commissions and Engagements. Other = All other civil intake recruitment. (Post War i.e. National Servicemen).
- (d) 1935-1943 QARANC Recruitment Unknown. Female Totals for these years therefore understate actual female civil intake.
- (e) QARANC figures are estimates.



Table 4:16  
Army Recruiting by Type of Recruit(a)  
Selected Years 1951-1970(b)  
OOOs and % of Total

Type of Recruit	1951-52		1955-56		1959-60		1962-63		1966-67		1969-70	
	OOOs	%	OOOs	%	OOOs	%	OOOs	%	OOOs	%	OOOs	%
<b>Normal Regular Engagements</b>												
(1) From Civil Life: No previous Service	12.07	45.8	26.97	77.2	17.24	55.2	23.11	63.1	12.45	48.6	9.55	46.1
(2) From Civil Life: Previous Service	4.23	16.1	1.04	3.0	2.58	8.3	3.33	9.1	1.34	5.2	0.37	1.8
(3) Rejoined Reservists	-	-	-	-	1.73	5.5	0.85	2.3	0.26	1.0	0.42	2.0
(4) From Short Service Serving Soldiers	2.18	8.3	0.05	0.1	0.07	0.2	0.09	0.2	..	..	..	..
(5) From National Servicemen	4.60	17.4	4.28	12.3	2.05	6.6	0.17	0.5	-	-	-	-
(6) Young Soldiers	-	-	-	-	-	-	-	-	4.33	16.9	2.95	14.2
(7) Enlisted Boys	2.23	8.5	2.26	6.5	4.54	14.5	6.80	18.6	4.84	18.9	6.50	31.4
<b>Total Normal Regular Engagements</b>	25.31	96.1	34.60	99.1	28.21	90.3	34.35	93.8	24.22	94.6	19.79	95.6
<b>Short Service Engagements</b>												
(1) From Civil Life: No previous Service	0.23	0.9	0.22	0.6	1.65	5.3	1.03	2.8	1.01	3.9	0.79	3.8
(2) From Civil Life: Previous Service	*	*	*	*	0.83	2.7	0.98	2.7	0.38	1.5	0.13	0.6
(3) From Nat. Servicemen Serving	0.40	1.5	0.04	0.1	0.19	0.6	0.02	0.1	-	-	-	-
(4) From Other Serving Soldiers	0.41	1.5	0.06	0.2	0.35	1.1	0.23	0.6	..	..	..	..
<b>Total Short Service Engagements</b>	1.04	3.9	0.32	0.9	3.02	9.7	2.26	6.2	1.39	5.4	0.92	4.4
<b>Total Male Normal and Short Service Engagements</b>	26.35	100	34.92	100	31.22	100	36.61	100	25.61	100	20.71	100
<b>Women Recruits</b>												
(1) WRAC	..	-	1.52	-	2.14	-	2.79	-	2.25	-	1.92	-
(2) QAKANC	..	-	0.30	-	0.33	-	0.45	-	0.49	-	0.38	-
<b>Total Women Recruits</b>	..	-	1.82	-	2.47	-	3.24	-	2.74	-	2.30	-

Source: Bibliography Items (6), (7).

Notes: (a) Other Ranks Only.

(b) Data discontinued in source after 1969-1970.

- Not Applicable

.. Not Available.

\* Included with 'From Civil Life, no previous Service'.

Table 4:17

UK Army Strengths by Type of Service  
Selected Years 1951-1975  
000s and % of Total Strength

Type of Service	31st Dec. 1951		31st Dec. 1955		31st Dec. 1959		1st Apr. 1965		1st Jan. 1975(a)	
	000s	%	000s	%	000s	%	000s	%	000s	%
<u>Male Officers</u>										
Regulars	17.46	3.95	18.84	4.58	16.49	6.05	15.17	7.91	..	..
Short Service	11.85	2.68	6.68	1.62	2.96	1.09	2.69	1.40	..	..
Extended Service	-	-	2.53	0.61	2.45	0.90	1.52	0.79	..	..
National Service	4.08	0.92	4.80	1.17	2.84	1.04	0.09	0.05	..	..
Others	0.26	0.06	0.13	0.03	0.01	neg.	0.01	neg.	-	-
<b>Total Male Officers</b>	<b>33.65</b>	<b>7.61</b>	<b>32.98</b>	<b>8.01</b>	<b>24.75</b>	<b>9.08</b>	<b>19.48</b>	<b>10.15</b>	<b>17.50</b>	<b>10.35</b>
<u>Male Other Ranks (Ex. Boys)</u>										
Regulars	155.81	35.26	168.84	41.00	127.83	46.90	143.90	75.02	..	..
Short Service	18.94	4.29	1.39	0.34	6.00	2.20	6.53	3.41	..	..
National Service	222.02	50.24	197.44	47.95	100.96	37.04	5.14	2.68	..	..
Others	0.12	0.03	-	-	-	-	-	-	-	-
<b>Total Male ORs</b>	<b>396.89</b>	<b>89.82</b>	<b>367.67</b>	<b>89.29</b>	<b>234.79</b>	<b>86.14</b>	<b>155.57</b>	<b>81.11</b>	<b>158.10</b>	<b>81.62</b>
<u>Boys</u>	<b>3.76</b>	<b>0.85</b>	<b>4.34</b>	<b>1.05</b>	<b>6.96</b>	<b>2.56</b>	<b>9.94</b>	<b>5.18</b>	<b>9.70</b>	<b>5.01</b>
<b>Total Male Army Os + ORs</b>	<b>434.30</b>	<b>98.28</b>	<b>404.99</b>	<b>98.35</b>	<b>266.50</b>	<b>97.78</b>	<b>184.99</b>	<b>96.44</b>	<b>187.10</b>	<b>96.59</b>
<u>Women</u>										
WRAC Officers	0.46	0.10	0.44	0.11	0.29	0.11	0.26	0.14	..	..
WRAC JRs	5.53	1.25	4.60	1.12	4.27	1.57	5.01	2.61	..	..
QARANG Officers	1.04	0.24	1.02	0.25	0.82	0.30	0.71	0.37	..	..
QARANG ORs	0.57	0.13	0.73	0.18	0.68	0.25	0.85	0.44	..	..
<b>Total Women</b>	<b>7.60</b>	<b>1.72</b>	<b>6.79</b>	<b>1.65</b>	<b>6.06</b>	<b>2.22</b>	<b>6.83</b>	<b>3.56</b>	<b>6.60</b>	<b>3.41</b>
<b>Total Army Strength</b>	<b>441.90</b>	<b>100</b>	<b>411.78</b>	<b>100</b>	<b>272.56</b>	<b>100</b>	<b>191.82</b>	<b>100</b>	<b>193.70</b>	<b>100</b>

Source: Bibliography Items (6), (7).

Notes: (a) UK Servicemen only: excludes Locally Enlisted Personnel.

- Not Applicable or nil.

.. Not Available.

**Table 4.18**  
Global Distribution of the Army (UK + India)  
Selected Years 1900 -1975  
% of Total Strength

Location	1899-00	1905-06	1910-11	1920-21	1925-26	1930-31	1934-35	1938-39	1951-52	1958-59	1965-66	1970-71	1973-74
UK (i.e. Home)	53.3	47.2	53.1	36.8	55.1	53.9	56.9	54.4	66.9	77.1	43.2	53.9	56.1
Europe(a)	-	-	-	4.4	4.0	-	-	-	-	-	25.4	28.7	33.6
Mediterranean(b)	5.7	5.6	6.8	1.1	3.2	3.0	2.9	3.5	-	-	4.6	3.3	2.6
Africa(c)	7.5	8.8	3.7	0.5	0.4	1.0	0.9	1.0	-	-	*	*	*
America(d)	3.0	2.8	0.9	0.5	0.8	0.5	0.5	0.5	-	-	0.6	*	*
Asia(e) (Less India Est.)	2.9	4.3	3.8	1.5	2.4	4.6	4.9	7.9	33.1	22.9	17.9	10.6	6.9
India Estb.(f)	25.7	28.4	29.4	14.8	27.9	30.8	28.0	25.1	-	-	-	-	-
Other(g)	1.5	1.5	2.3	40.4	6.2	6.1	5.8	7.5	-	-	8.3	2.2	..
Miscellaneous(h)	0.4	0.4	..	-	..	0.1	0.1	0.1	-	-	-	1.3	0.8
Total Strength	100	100	100	100	100	100	100	100	100	100	100	100	100
OOOs	286	275	258	442	218	196	206	226	517	376	221	188	181

Source: Bibliography Items (3), (4), (8) and Ministry of Defence Sources.

Notes: (a) 1920s = Expeditionary forces in Flanders and the Rhine. Post WW2, mainly forces in Germany.

(b) Gibraltar, Cyprus and Malta only.

(c) South Africa, Mauritius, Sierra-Leone, Sudan.

(d) Canada, Bermuda, Jamaica, Barbados.

(e) Ceylon, Straits Settlement, Malaya, China, Malaysia, Hong Kong, Singapore.

(f) Indian Establishment was dissolved in 1947.

(g) Pre 1914; Egypt, 1920-21 Expeditionary Forces in Palestine, Egypt, Black Sea, Mesopotamia and so on. 1925-26 to 1938-39; Palestine, Egypt. 1965-66 Persian Gulf, Aden, Mauritius, Miscellaneous. 1970-71, 1973-74 Persian Gulf.

(h) Inter War = Aden.

- None or Not Applicable .. Less than 0.05% \* Included under Miscellaneous.



Table 5:1 (Also Table 2:4)

UK Royal Air Force strength 1918-1919 - 1974-1975  
 Actual Air Force strength (Table 2) 1918-1975

Fin. Year Ending	Actual Strength (a,b)	Vote A (b,c) (Maximum)	Fin. Year Ending	Actual Strength Cent'o.	Vote A Cent'o.
1919	291748	1000	1948	327925	370000
1920	77880	150000	1949	273635	325000
1921	21866	29730	1950	242110	255000
1922	27345	40880	1951	241600	243000
1923	28301	31176	1952	260500	235000
1924	28460	33000	1953	283350	315000
1925	30327	35000	1954	291230	302000
1926	31692	36000	1955	269443	288000
1927	30640	35500	1956	257190	272000
1928	28139	33000	1957	241203	257000
1929	28888	32500	1958	214315	240000
1930	25240	32000	1959	185931	203000
1931	29981	32000	1960	171824	180000
1932	30263	32000	1961	163915	174000
1933	29520	32000	1962	156033	164000
1934	28470	31000	1963	148457	154000
1935	28780	31000	1964	141404	148000
1936	35942	45000	1965	134920	140000
1937	48583	55000	1966	120340	136000
1938	60370	70000	1967	126807	131000
1939	83035	102000	1968	123471	129000
1940	120000	-	1969	118228	125000
1941	303800	-	1970	114558	118000
1942	702800	-	1971	113674	115400
1943	966500	-	1972	112365	113900
1944	1155500	-	1973	109241	113500
1945	1187100	-	1974	103225	110000
1946	1117000	-	1975	97500	104000
1947	537060	760000			

Source: Bibliography Items: (1), (3), (8), (10) and (22).

Notes: .. Not Available - Not Applicable.

- (a) 1918-19, October 1918 (See also note (c)).  
 1919-20 - 1937-38, Monthly Average April-March.  
 1938-39 Average of March 1938 and March 1939.  
 1939-40 August 1939. 1940-41 - 1945-46 June each year  
 (Including Nurses).  
 1946-47 - 1974-75 Average of 1st April Actuals current and  
 following financial years. (e.g. 1946-47 = 1st April 1946 +  
 1st April 1947 ÷ 2) 1974-75, Estimate.
- (b) All serving personnel (including Locally enlisted overseas) are  
 covered and, in the case of Vote As, all supplementary estimates  
 of numbers are included.
- (c) 1918-1919 Vote A was a token vote. Numbers were actually borne  
 under Army Votes for this year; the Actual Strength quoted was  
 borne on Army votes.

Table 5:2

## Royal Air Force Personnel: Strengths 1935-1975

By Males, Females and Nurses (000s)

Year	Royal Air Force (Males)	Womens Royal Air Force (Females)	PMRAFNS (Females)	Royal Air Force Total
1935 <sup>a</sup>	32.1	-	-	32.1
1936	45.8	-	-	45.8
1937	56.2	-	-	56.2
1938	69.5	-	-	69.5
1939	112.5	-	0.2	112.5
1940	291.4	11.9	0.5	303.8
1941	664.6	37.4	0.8	702.8
1942	839.8	125.7	1.0	966.5
1943	972.5	181.8	1.2	1155.5
1944	1011.4	174.4	1.3	1187.1
1945	962.6	153.0	1.4	1117.0
1946	438.5	46.7	0.8	486.0
1947	284.5	22.5	0.5	307.5
1948 <sup>b</sup>	222.2	15.5	0.3	238.0
1949	205.1	14.5	0.3	219.9
1950	182.7	10.1	0.3	197.1
1951	241.4	9.4	0.4	251.2
1952	262.2	10.0	0.4	272.6
1953	268.2	9.5	0.5	278.2
1954	251.9	8.6	0.5	261.0
1955	245.7	6.8	0.5	253.0
1956	236.1	5.4	0.5	242.0
1957	215.9	4.7	0.5	221.1
1958	180.1	4.3	0.5	184.9
1959	165.9	4.9	0.5	171.3
1960	158.1	5.3	0.4	163.8
1961	149.6	5.6	0.4	155.6
1962	141.3	6.6	0.4	148.3
1963	135.0	6.5	0.5	142.0
1964	127.7	5.4	0.5	133.6
1965	124.6	4.9	0.6	130.1
1966	120.5	4.8	0.6	125.9
1967	117.8	5.1	0.5	123.4
1968	113	4.7	0.6	118.5
1969	109	4.6	0.6	114.0
1970	107	4.8	0.8	112.5
1971	106	5.2	0.8	112.0
1972	105	5.1	0.8	111.0
1973	100	4.6	0.7	105.5
1974	94	..	5.0	99.0
1975	91	..	5.0	96.0

Source: Bibliography Items (8) and (27).

Notes: .. Not Available.

- Not Applicable.

(a) Actual Strengths including locally enlisted Personnel 1935-38 at 31st March. 1939-47 at 30th June. 1935-45 and 1968-73 PMRAFNS figures are estimates.

(b) Actual Strengths excluding all locally enlisted Personnel at 30th June each year 1948-75.

Table 5:3

RAF Manpower, Home and Overseas 1946/47 - 1974/75

Miscellaneous Analyses (Vote A)

Fin. Year Ending	RAF (UK Personnel)		Other RAF			Local Personnel Abroad(e)
	Total All Ranks	On Release Leave(a)	Dominion Forces(b)	Colonial Forces(c)	Misc. Forces(d)	
1947	734500	142000	8000	4300	13200	..
1948	354000	40000	250	2750	13000	..
1949	316000	53000	200	3200	5600	5000 *
1950	251400	19000	200	3200	200	4250
1951	211350	5000	350	3300	28000	4800
1952	265050	5700	1450	3500	15000	4800
1953	307500	4500	1750	5750	-	6800
1954	294800	5000	2100	5100	-	6300
1955	281500	4500	1900	4600	-	6000
1956	268000	..	800	3200	-	4100
1957	252200	..	800	4000	-	4000
1958	237400	..	800	1800	-	1800
1959	200280	..	900	1900	-	1870
1960	177600	..	700	1700	-	1600
1961	172100	..	700	1200	-	1150
1962	162100	..	700	1200	-	1160
1963	152100	..	700	1200	-	1200
1964	146000	..	800	1200	-	1200
1965	138400	..	500	1100	-	1100
1966	134500	..	400	1100	-	1100
1967	129600	..	400	1000	-	1000
1968	126600	..	350	1050	-	1050
1969	123650	..	370	980	-	980
1970	116630	..	450	920	-	920
1971	114250	..	450	700	-	700
1972	112800	..	500	600	-	600
1973	112400	..	500	600	-	600
1974	108900	..	500	600	-	600
1975	102900	..	600	500	-	500

Source: Bibliography Items (3), (10).

Notes: - Not Applicable or None. .. Not Available.

(a) Also included in the 'Total All Ranks' Column.

(b) Overseas Forces personnel serving in the UK. (From 1949-50 retitled 'Commonwealth' forces.

(c) RAF personnel recruited and (mainly) serving overseas. (From 1949-50 retitled Locally Enlisted Personnel - LEPS).

(d) 1947 Allied Air Forces, 1948-50 Polish Resettlement Corps. 1951, 1952, Supplementary Vote A numbers.

(e) 1947 - 1957 'Colonial Forces' + Locally raised levies which were raised by the RAF for internal security purposes (e.g. In Aden) but borne on Civil Votes, not defence Votes and therefore not included in the RAF Vote A.

1957-1963 Average Annual Expected Strength of the 'Colonial Forces'. 1963 - 1975 as 'Colonial Forces' Column.

\* Approx.



Table 5:4

UK Royal Air Force Vote A (Maximum) Strengths 1918-19 - 1974-75  
By Branches of the Services

Fin. Year Ending	Royal Air Force (a)	WAAF	PMRAFNS (Nurses) (b)	Misc. (c)	Total (d)
1919	291748	-	-	-	291748
1920	79570	*	-	70430	150000
1921	29730	-	-	-	29730
1922	30880	-	(77)	10000	40880
1923	31760	-	(117)	-	31760
1924	33000	-	(129)	-	33000
1925	35000	-	(131)	-	35000
1926	36000	-	(134)	-	36000
1927	34800	-	(134)	700	35500
1928	32600	-	(111)	400	33000
1929	32380	-	(104)	120	32500
1930	32000	-	(104)	-	32000
1931	32000	-	(111)	-	32000
1932	32000	-	(111)	-	32000
1933	32000	-	(104)	-	32000
1934	31000	-	(107)	-	31000
1935	31000	-	(107)	-	31000
1936	45000	-	(109)	(12000)	45000
1937	55000	-	(114)	(5000)	55000
1938	70000	-	(125)	-	70000
1939	83000	-	(147)	19000	102000
1940	118000	2000	(200)	-	120000
1941	291400	11900	500	-	303800
1942	664600	37400	800	-	702800
1943	839800	125700	1000	-	966500
1944	972500	181800	1200	-	1155500
1945	1011400	174400	1300	-	1187100

For footnotes etc. see end of Table.

**Table 5:4 (Continued)**  
**(UK Royal Air Force Vote A (Maximum) Strengths**  
**by Branches of Service) Continued**

Fin. Year Ending	Royal Air Force (U.K.)	WAAF/ WRAF	PMRAFNS	Other RAF <sup>(e)</sup>	Misc.	Total
1946	962600	153000	1400	*	-	1117000
1947	734500	*	*	25500	-	760000
1948	354000	*	*	16000	-	370000
1949	292500	23000	500	9000	-	325000
1950	235000	16000	400	3600	-	255000
1951	199500	11500	350	3650	28000	243000
1952	253800	10900	350	4950	15000	285000
1953	295700	11350	450	7500	-	315000
1954	284000	10350	450	7200	-	302000
1955	271500	9450	550	6400	-	288000
1956	260000	7500	500	4000	-	272000
1957	246000	5700	500	4800	-	257000
1958	232000	4920	480	2600	-	240000
1959	195200	4500	500	2800	-	203000
1960	172450	4700	450	2400	-	180000
1961	165650	6000	450	1900	-	174000
1962	155900	5790	410	1900	-	164000
1963	145300	6390	410	1900	-	154000
1964	138300	7300	400	2000	-	148000
1965	131900	6000	500	1600	-	140000
1966	128500	5300	700	1500	-	136000
1967	123500	5450	650	1400	-	131000
1968	119900	5950	750	1400	-	128000
1969	116910	6000	740	1350	-	125000
1970	110750	5000	840	1370	-	118000
1971	107750	5620	880	1150	-	115400
1972	106300	5500	1000	1100	-	113900
1973	106000	5300	1100	1100	-	113500
1974	103050	4800	1050	1100	-	110000
1975	97250	4700	950	1100	-	104000

**Source:** Bibliography Items (3), (10), (27).

- Notes:**
- (a) 1918/1919 - 1945/46 Covers UK and overseas personnel serving in male branches of the RAF and borne on RAF Votes.  
1946/47 - 1974/75 Covers UK Personnel only.
  - (b) Prior to 1947-48 PMRAFNS were not included in Vote A.
  - (c) 1919-20, personnel on release leave. 1926-27 - 1928-29 Personnel borrowed from the Indian (RAF) establishment. All other years, supplementary estimates added to the RAF Vote A.
  - (d) These totals correspond to those shown in table 5:1 of Vote A strengths except 1918-19 and 1940/41 - 1945/46 when they correspond to the 'Actuals' totals of the same table.
  - (e) Local forces serving overseas, Commonwealth forces serving in the UK (both 1945/46 - 1974/75) and Polish forces serving with the RAF (1945/46 - 1949/50), borne on RAF Votes.
  - ( ) Items not included in the 'Total' column. (1936, 1937 Supplementary Vote A are already included in the RAF column).
  - \* Included in the RAF column.
  - Not applicable or none.

**Table 5:5**  
**RAF Personnel: Strengths 1948-1975<sup>(a)</sup>**  
**By Male Regulars, National Servicemen and Females**  
**(OOOs) at 1st April each year**

(OOOs)

Year	RAF (Male Regulars)	RAF (Nat. Service)	RAF (Females)	RAF Total
1946				
1947				
1948				
1949	112.9	96.6	15.4	224.9
1950 <sup>b</sup>	114.7	76.0	11.4	202.1
1951	139.4	88.9	9.5	237.8
1952	171.5	89.1	10.2	270.8
1953	188.9	78.1	10.1	277.1
1954	186.5	69.3	9.3	265.1
1955	180.1	70.2	7.9	258.2
1956	161.7	74.8	6.1	242.6
1957	153.9	68.7	5.3	227.9
1958	140.7	45.6	4.7	191.0
1959	142.3	26.0	4.9	173.2
1960	139.4	18.4	5.7	163.5
1961	138.8	13.4	6.0	158.2
1962	136.7	5.4	6.8	148.9
1963	136.5	-	7.3	143.8
1964	130.0	-	6.1	136.1
1965	129.8	-	5.5	135.3
1966	121.6	-	5.4	127.0
1967	118.5	-	5.6	124.1
1968	114.9	-	5.6	120.5
1969	109.0	-	5.2	114.2
1970	107.4	-	5.6	113.0
1971	106.2	-	5.9	112.1
1972	104.8	-	6.0	110.8
1973	100.3	-	5.6	105.9
1974	94.3	-	5.0	99.3
1975	90.6	-	5.0	95.6

**Source:** Bibliography Items ( 5 ), ( 7 ), ( 8 ).

**Notes:** (a) Excludes Locally Enlisted Personnel.

(b) Estimates in whole or part.

- Not Applicable.



Table 5:6  
RAF Manpower 1918/1919 - 1974/75  
RAF, WRAP, PMRAFNS and Indian Establishment - Other Rank Splits

Fin. Year Ending	Total Royal Air Force			Total RAF Vote A (a)
	All Officers	All ORs	Os + ORs (d)	
1919	27906	263842	291748	291748
1920	6270	73300	79570	150000
1921	3211	26519	29730	29730
1922	3067	27813	30880	40880
1923	3176	28000	31176	31176
1924	3305	29695	33000	33000
1925	3511	31489	35000	35000
1926	3757	32243	36000	36000
1927	3655	31145	34800	35500
1928	3555	29045	32600	33000
1929	3560	28820	32380	32500
1930	3450	28550	32000	32000
1931	3465	28535	32000	32000
1932	3368	28632	32000	32000
1933	3378	28642	32000	32000
1934	3318	27682	31000	31000
1935	3301	27699	31000	31000
1936	3728	41272	45000	45000
1937	4834	50166	55000	55000
1938	5461	64539	70000	70000
1939	7199	88801	96000	102000
1940	8676	109324	118000	120000
....	....	.....	.....	.....
1947c	79250	680750	760000	760000
1948c	34260	335740	370000	370000

For footnotes etc. see end of Table.

RAF Indian Establishment (b)		
Os	ORs	Os + ORs
233	1943	2176
241	1896	2137
233	1943	2176
236	1919	2145
237	1867	2104
238	1870	2108
264	1914	2178
264	1910	2174
265	1909	2174
264	1927	2191

Table 5:6 (Continued)  
(RAF Manpower Officer - Other Ranks Splits) Continued

Fin. Year Ending	RAF (UK)		RAF (Other)		WRAF		PMRAFNS		Total All Branches (d)		
	OFFs	ORs	OFFs	ORs	OFFs	ORs	OFFs	ORs	OFFs	ORs	Os + ORs
1949	23700	268800	1700	7300	300	22200	500	-	26700	298300	325000
1950	22000	213000	300	3300	800	15200	400	-	23500	231500	255000
1951	20100	179400	250	3400	600	10900	350	-	21300	193700	215000
1952	24500	229300	350	4600	600	10300	350	-	25800	244200	270000
1953	32100	263600	450	7050	700	10650	450	-	33700	281300	315000
1954	28400	255600	500	6700	650	9700	450	-	30000	272000	302000
1955	27300	244200	500	6000	650	8800	550	-	29000	259000	288000
1956	26200	233800	400	3600	600	6900	500	-	27700	244300	272000
1957	26000	220000	400	4400	500	5200	500	-	27400	229600	257000
1958	25200	206800	300	2300	420	4500	480	-	26400	213600	240600
1959	24400	170800	400	2400	400	4100	500	-	25700	177300	203000
1960	22250	150200	300	2100	400	4300	450	-	23400	156600	180000
1961	21500	144150	250	1650	400	5600	450	-	22600	151400	174000
1962	21700	134200	300	1600	390	5400	410	-	22800	141200	164000
1963	21400	123900	300	1600	390	6000	410	-	22500	131500	154000
1964	20800	117500	350	1650	450	6850	400	-	22000	126000	148000
1965	20800	111100	300	1300	500	5500	400	100	22000	118000	140000
1966	20800	107700	200	1300	500	4800	500	200	22000	114000	136000
1967	20850	102850	200	1200	450	5000	450	200	21750	109250	131000
1968	20700	99200	200	1200	450	5500	450	300	21800	106200	128000
1969	20530	96380	220	1130	490	5510	430	310	21670	103330	125000
1970	19590	91200	250	1120	490	4510	390	450	20720	97280	118000
1971	19450	88300	250	900	520	5100	370	510	20590	94810	115400
1972e	19100	87200	250	850	500	5000	400	600	20250	93650	113900
	19360	86940	250	850	520	4980	400	600	20530	93370	113900
1973	19500	86500	250	850	500	4800	400	700	20650	92850	113500
1974	19400	83650	250	850	500	4300	350	700	20500	89500	110000
1975	18550	78700	300	800	400	4300	350	600	19600	84400	104000

Source: Bibliography Items (3), (10).

Notes: - = None .... = No data available 1941 - 1946. (a) The Vote A total corresponds to that shown in Table 5.4  
The (Os + ORs) total differs from this in 1920, 1922, 1926, 1927, 1928 and 1939 when supplementary Vote A  
Estimates were needed. (See the 'Misc.' column of table 5:4). (b) The Indian Establishment was paid for  
by India and not, therefore, borne on RAF Votes. The data for this series is incomplete but the Indian  
Establishment ceased with Indian independence (1947-48). (c) Includes WAAF, PMRAFNS and RAF (other) personnel.  
(d) The (Os + ORs) column is also the Vote A total (vide Table 5:1) except for 1951 and 1952 when  
supplementary Vote As of 28000 and 15000 respectively were needed. (e) From 1971-72 (lower line) 'Officers  
Designate' are treated as Officers. Prior to this 'Officers Designate' did not form a separate category and were  
included with Other Ranks. (For estimates of Officers Designate numbers 1973-1975 see table 5:7).

(Estimates)

Table 5:7

RAF Manpower: Estimated Strengths 1918/19 - 1974/75 (a)

Total RAF Officers and Other Ranks by Sub Divisions.

Fin. Year Ending	Officers				Other Ranks					Total All Ranks
	Air Offs.	COs	Cadets	All Offs.	WOs	NCOs	Men	Boys <sup>(b)</sup>	All ORs	
1919	..	..	..	27906	..	..	..	..	263842	291748
1920	..	..	..	6270	..	..	..	..	73300	79570
1921	19	3040	152	3211	324	2900	19815	3480	26519	29730
1922	19	2913	135	3067	329	3433	21860	2191	27813	30880
1923	31	3045	100	3176	300	3800	22200	1700	28000	31176
1924	31	3231	143	3305	259	4129	22744	2463	29695	33000
1925	35	3326	150	3511	306	4334	23500	3349	31489	35000
1926	35	3592	130	3757	338	4853	24700	2552	32243	36000
1927	35	3500	120	3655	345	4800	22800	3200	31145	34800
1928	35	3400	120	3555	320	4700	20525	3500	29045	32600
1929	35	3400	125	3560	320	5000	20000	3500	28820	32380
1930	38	3300	112	3450	420	5000	19880	3250	28550	32000
1931	38	3300	127	3465	460	5300	19375	3400	28535	32000
1932	38	3200	130	3368	500	5500	19432	3200	28632	32000
1933	38	3200	140	3378	512	5900	19440	2770	28642	32000
1934	38	3150	130	3318	520	6000	19042	2120	27682	31000
1935	41	3150	110	3301	450	6450	19049	1750	27699	31000
1936	46	3550	132	3728	518	8500	28254	4000	41272	45000
1937	54	4636	144	4834	553	10523	33428	5662	50166	55000
1938	67	5247	147	5461	600	13553	42800	7586	64539	70000
1939	69	6943	165	7177	721	15095	51696	8311	75823	83000
1940	..	..	..	8676	..	..	..	..	109324	118000
....	...	...	...	....	...	....	....	...	.....	.....
1947	..	..	..	79250	..	..	..	..	680750	760000
1948c	..	..	..	34260	..	..	..	..	335740	370000
	..	..	..	27750	..	..	..	..	298800	326550

For footnotes etc, see end of Table.



**Table 5:7**  
**RAF Manpower: Estimated Strengths 1918/19 - 1974/75 (a)**  
**Total RAF Officers and Other Ranks by Sub Divisions.**

Fin. Year Ending	Officers				Other Ranks					Total All Ranks
	Air Offs.	COs	Cadets	All Offs.	WOs	NCOs	Men	Boys <sup>(b)</sup>	All ORs	
1919	..	..	..	27906	..	..	..	..	263842	291748
1920	..	..	..	6270	..	..	..	..	73300	79570
1921	19	3040	152	3211	324	2900	19815	3480	26519	29730
1922	19	2913	135	3067	329	3433	21860	2191	27813	30880
1923	31	3045	100	3176	300	3800	22200	1700	28000	31176
1924	31	3231	143	3305	259	4129	22744	2463	29695	33000
1925	35	3326	150	3511	306	4334	23500	3349	31489	35000
1926	35	3592	130	3757	338	4853	24700	2552	32243	36000
1927	35	3500	120	3655	345	4800	22800	3200	31145	34800
1928	35	3400	120	3555	320	4700	20525	3500	29045	32600
1929	35	3400	125	3560	320	5000	20000	3500	28820	32380
1930	38	3300	112	3450	420	5000	19880	3250	28550	32000
1931	38	3300	127	3465	460	5300	19375	3400	28535	32000
1932	38	3200	130	3368	500	5500	19432	3200	28632	32000
1933	38	3200	140	3378	512	5900	19440	2770	28642	32000
1934	38	3150	130	3318	520	6000	19042	2120	27682	31000
1935	41	3150	110	3301	450	6450	19049	1750	27699	31000
1936	46	3550	132	3728	518	8500	28254	4000	41272	45000
1937	54	4636	144	4834	553	10523	33428	5662	50166	55000
1938	67	5247	147	5461	600	13553	42800	7586	64539	70000
1939	69	6943	165	7177	721	15095	51696	8311	75823	83000
1940	..	..	..	8676	..	..	..	..	109324	118000
....	...	...	...	....	...	....	....	....	.....	.....
1947	..	..	..	79250	..	..	..	..	680750	760000
1948c	..	..	..	34260	..	..	..	..	335740	370000
	..	..	..	27750	..	..	..	..	298800	326550

For footnotes etc., see end of Table.

Table 5:8

RAF Manpower: Estimated Expected Average Annual Strengths 1947/48 - 1974/75  
 RAF Male Personnel (Home and Overseas) by Rank Sub Divisions

Fin. Year Ending	Officers					Other Ranks			Total Strength Os + ORs
	Air Os	Senior Os(a)	Junior Os(b)	Os Des- ignate	Total Os	WOs + NCOs	Men(c)	Total ORs	
1948	..	..	..	-	26200	..	..	272300	298500
1949	225	6275	14100	-	20600	70000	151900	221900	242500
1950	215	6100	14085	-	20400	54000	140000	194000	214400
1951	215	6100	13685	-	20000	50000	121400	171400	191400
1952	220	6300	15910	-	22430	60000	157300	217300	239730
1953	240	6700	21360	-	28300	53000	196550	249550	277850
1954	250	6900	21150	-	28300	55000	192600	247600	275750
1955	250	6870	20300	-	27420	61000	171800	232800	260220
1956	240	7100	18800	-	26150	60000	164500	224500	250650
1957	240	7400	18160	-	25800	61000	154200	215200	241000
1958	240	7300	17060	-	24600	61000	131800	192800	217400
1959	240	6800	15960	-	23000	56000	99330	155330	178330
1960	240	6500	14990	-	21730	51000	92200	143200	164930
1961	240	6400	14660	-	21300	51000	87600	138600	159900
1962	230	6400	14730	-	21360	50500	76750	127250	148610
1963	230	6400	14405	-	21035	51300	68080	119380	140415
1964	225	6500	13785	-	20510	52430	60360	112790	133300
1965	230	6550	13700	-	20480	51490	55960	107450	127930
1966	235	6540	13745	-	20520	50800	55200	106000	126520
1967	230	6630	13470	-	20330	50800	48915	99715	120045
1968	230	6620	13400	-	20250	51290	45890	97180	117430
1969	225	6668	12812	-	19705	46195	47180	93375	113080
1970	216	6410	12584	-	19210	47885	40905	88790	108000
1971	202	6468	12445	-	19115	46005	40205	86210	105325
1972d	206	6481	12098	225	19010	44295	40640	84935	103945
1973	207	6748	11920	215	19090	41678	42147	83825	102915
1974	202	6647	11751	120	18720	40580	38895	79475	98195
1975	200	6430	11280	130	18040	38843	37417	76260	94300

Source: Bibliography Item (3)

Notes: (a) Group Captains, Wing Commanders and Squadron Leaders.

(b) Flight Lieutenants, Flying Officers and Pilot Officers.

(c) Air Craftmen, Apprentices and boys.

(d) Prior to 1972 Officers Designate were not a separate category and were included in the 'Men' column.

- Not Applicable or None .. Not Available.

Table 5:9

RAF Manpower: Estimated Expected Annual Average Strengths 1947/48 - 1974/75  
WRAF Personnel by Rank Sub Divisions

Fin. Year Ending	Officers					Other Ranks			Total Strength Os + ORs
	Air Os	Senior Os(a)	Junior Os(b)	Os Des- ignate	Total Os	WOs + NCOs	Women(c)	Total ORs	
1948	..	..	..	-	1000	..	..	26500	27500
1949	1	79	650	-	730	3000	16700	19700	20430
1950	1	89	510	-	600	3000	11000	14000	14600
1951	1	99	500	-	600	2500	6750	9250	9850
1952	1	99	470	-	560	2000	7350	9350	9920
1953	1	99	550	-	650	1600	8500	10100	10750
1954	1	99	550	-	650	1600	7900	9500	10150
1955	1	99	550	-	650	1600	7000	8600	9250
1956	1	99	500	-	600	1500	4750	6250	6850
1957	1	94	405	-	500	1300	3700	5000	5500
1958	1	84	330	-	415	1200	3000	4200	4615
1959	1	94	290	-	385	1200	2900	4100	4485
1960	1	85	284	-	370	1000	3270	4270	4640
1961	1	80	279	-	360	900	4400	5300	5660
1962	1	74	295	-	370	770	4750	5520	5890
1963	1	74	295	-	370	750	5225	5975	6345
1964	1	69	340	-	410	760	5320	6080	6490
1965	1	64	370	-	435	625	4270	4895	5330
1966	1	64	370	-	435	580	4045	4625	5060
1967	1	57	357	-	415	485	4090	4575	4990
1968	1	56	353	-	410	450	4290	4740	5150
1969	1	56	383	-	440	380	4255	4635	5075
1970	1	49	390	-	440	390	3745	4135	4575
1971	1	49	410	-	460	410	3955	4365	4825
1972d	1	53	386	20	460	470	4240	4710	5170
1973	1	49	375	20	445	337	4133	4470	4915
1974	1	47	342	10	400	420	3415	3835	4235
1975	1	49	280	10	340	429	3341	3770	4110

Source: Bibliography Item (3)

Notes: (a) Group Officers, Wing Officers, Squadron Officers.

(b) Flight Officers, Flying Officers, Pilot Officers.

(c) Aircraftwomen.

(d) Prior to 1972 Officers Designate were not a separate category and were included in the 'Women' column.

- Not Applicable or none. .. Not Available.



Table 5:10

RAF Manpower: Estimated Expected Annual Average Strengths 1947/48 - 1974/75  
 PMRAFNS Personnel by Rank Sub Divisions

Fin. Year Ending	Officers				Nurses				Total Strength Os + Nurses
	Air Os	Senior Os(a)	Junior Os(b)	Total Os	Staff Nurses	Student Nurses	SENs(c)	Total Nurses	
1948	..	..	..	550	-	-	-	-	550
1949	1	32	375	408	-	-	-	-	408
1950	1	22	342	365	-	-	-	-	365
1951	1	32	317	350	-	-	-	-	350
1952	1	39	310	350	-	-	-	-	350
1953	1	39	360	400	-	-	-	-	400
1954	1	49	400	450	-	-	-	-	450
1955	1	59	470	530	-	-	-	-	530
1956	1	69	430	500	-	-	-	-	500
1957	1	79	420	500	-	-	-	-	500
1958	1	84	400	485	-	-	-	-	485
1959	1	90	394	485	-	-	-	-	485
1960	1	88	341	430	-	-	-	-	430
1961	1	83	356	440	-	-	-	-	440
1962	1	79	320	400	-	-	-	-	400
1963	1	79	320	400	-	-	-	-	400
1964	1	89	310	400	10	100	-	110	510
1965	1	89	300	390	5	95	-	100	490
1966	1	94	305	400	5	145	-	150	550
1967	1	89	305	395	10	165	-	175	570
1968	1	89	300	390	15	170	75	260	650
1969	1	84	280	365	15	170	150	335	700
1970	1	82	272	355	15	170	220	405	760
1971	1	78	261	340	15	175	320	510	850
1972	1	75	264	340	..	..	..	540	880
1973	1	74	265	340	..	..	..	650	990
1974	1	66	258	325	..	..	..	615	940
1975	1	57	242	300	..	..	..	540	840

Source: Bibliography Item (3).

Notes: (a) Group Officers, Wing Officers, Squadron Officers.

(b) Flight Officers, Flying Officers.

(c) State Enrolled Nurses.

- Not Applicable or None .. Not Available.

Table 5:11

RAF Armed Forces: Recruitment: Civil Intake <sup>(a)</sup>  
 Males and Females (OOOs)

Calendar Year (b)	RAF Males			RAF Females <sup>(d)</sup>			RAF Total
	Regular <sup>(c)</sup>	Others <sup>(c)</sup>	Total	WRAF	PMRAFNS	Total	
1935	10.2	-	10.2	-	-	-	10.2
1936	13.2	-	13.2	-	-	-	13.2
1937	13.9	-	13.9	-	-	-	13.9
1938	27.4	-	27.4	-	-	-	27.4
1939	-	62.3	62.3	..	..	..	62.3
1940	..	..	291.7	..	..	..	291.7
1941	..	..	341.8	83.2	..	83.2	425.0
1942	..	..	174.7	78.0	..	78.0	252.7
1943	..	..	99.9	28.8	..	28.8	128.7
1944 <sup>e</sup>	..	..	42.8	12.3	0.2	12.5	65.3
1945 <sup>e</sup>	..	..	51.7	2.4	0.1	2.5	54.2
1946	..	..	102.0	6.8	-	6.8	108.8
1947	31.4	48.1	79.5	9.8	0.1	9.9	89.4
1948	14.6	46.9	61.5	5.7	0.1	5.8	67.3
1949	12.5	43.7	56.2	3.7	0.1	3.8	60.0
1950	20.6	52.5	73.1	3.0	0.1	3.1	76.2
1951	43.7	47.4	91.1	3.9	0.1	4.0	95.1
1952	38.6	39.8	78.4	3.4	0.1	3.5	81.9
1953	31.0	36.7	67.7	2.7	0.1	2.8	70.5
1954	27.7	33.4	61.1	1.8	0.1	1.9	63.0
1955	20.8	42.2	63.0	1.4	0.1	1.5	64.5
1956	21.1	36.7	57.8	1.4	0.1	1.5	59.3
1957	17.1	20.8	37.9	1.2	0.1	1.3	39.2
1958	21.3	12.1	33.4	1.5	0.1	1.6	35.0
1959	16.8	11.3	28.1	2.3	0.1	2.4	30.5
1960	13.9	9.1	23.0	1.9	0.1	2.0	25.0
1961	12.5	-	12.5	2.5	0.1	2.6	15.1
1962	12.0	-	12.0	3.0	0.1	3.1	15.1
1963	4.0	-	4.0	1.4	0.1	1.5	5.5
1964	5.0	-	5.0	1.5	0.1	1.6	6.6
1965	6.5	-	6.5	1.8	0.1	1.9	8.4
1966	7.6	-	7.6	1.9	0.1	2.0	9.6
1967	7.4	-	7.4	2.0	0.1	2.1	9.5
1968	6.8	-	6.8	1.4	0.1	1.5	8.3
1969/70	9.0	-	9.0	..	..	2.6	11.6
1970/71	9.1	-	9.1	..	..	3.0	12.1
1971/72	7.9	-	7.9	..	..	2.4	10.3
1972/73	4.7	-	4.7	..	..	1.8	6.5
1973/74	5.4	-	5.4	..	..	1.4	6.8
1974/75	7.0	-	7.0	..	..	2.4	9.4

Source: Bibliography Item (27) 1935-1967 and (8) 1968-1975.

Notes: .. Not Available. - Nil.

(a) See Table 3:8 note (a).

(b) 1969-1975 figures are on a financial year basis (1st April - 31st March).

(c) See Table 4:15 footnote (c).

(d) 1935-1943 PMRAFNS and 1939, 1940 WRAF Recruitment unknown. Female totals for these years therefore understate actual Female civil intake: For 1939, 1940 this understatement is probably very significant.

(e) PMRAFNS figures are estimates.

**Table 5:12**  
**RAF Recruitment by Length of Initial Engagement\***  
**Selected Years 1951 - 1960**  
**000s and %**

Length of Initial Engagement	1950-51		1955-56		1959-60	
	000s	%	000s	%	000s	%
3 Years	12.52	52.8	9.96	47.1	3.16	18.2
4 Years	0.48	2.0	3.88	18.4		
5 - 8 Years	8.55	36.0	4.05	19.2	5.12	29.5
9 Years and Over	0.65	2.7	0.68	3.2	5.24	30.2
Apprentices	1.54	6.5	1.21	5.7	1.29	7.4
Boys Entrants			1.35	6.4	2.55	14.7
Total	23.74	100	21.14	100	17.36	100

Source: Bibliography Item (5).

Note: \* Male Other Ranks Only.

**Table 5:13**  
**RAF Recruitment by Type of Recruit\***  
**Selected Years 1962-1970**  
**000s and %**

Type of Recruit	1961-62		1965-66		1969-70	
	000s	%	000s	%	000s	%
<u>Normal Regular Engagements</u>						
(1) From Civil Life: No Prev. Service	7.55	61.4	4.10	65.0	5.06	62.5
(2) From Civil Life: Previous Service	0.88	7.2	0.20	3.2	0.15	1.9
(3) National Servicemen	0.15	1.2	-	-	-	-
(4) Young Airmen	-	-	0.59	9.3	0.78	9.6
(5) Enlisted Apprentices & Boys Entrants	3.71	30.2	1.42	22.5	2.10	26.0
Total Normal Engagements	12.29	100	6.31	100	8.09	100
<u>Women Recruits</u>						
(1) WRAF Normal Service	2.32	-	1.78	-	2.13	-
(2) WRAF Local Service	0.17	-	0.08	-	0.05	-
(3) PMRAFNS (Other Ranks)	-	-	0.07	-	0.25	-
Total Women Recruits	2.49	-	1.92	-	2.43	-

Source: Bibliography Item (8).

Note: \* Other Ranks Only.



Table 6:1

UK Tri-Service Regular + Reserve Forces 1900 - 1975<sup>(a)</sup>Approximate Actual Strengths: 000s<sup>(b)</sup>

000s

Year	Regular Strength	Reserve Strength	Total Reg. + Res.	Year	Regular Strength	Reserve Strength	Total Reg. + Res.
1900	379	411	790	1940	539	681	1220
1901	531	454	985	1941	2281	..	2281
1902	535	445	980	1942	3396	..	3396
1903	490	475	965	1943	4127	..	4127
1904	428	492	920	1944	4797	..	4797
1905	428	512	940	1945	5011	..	5011
1906	409	526	935	1946	5138	..	5138
1907	401	544	945	1947	3033	..	3033
1908	387	538	925	1948	1512	83	1595
1909	384	481	865	1949	1065	110	1175
1910	387	543	930	1950	896	144	1040
1911	389	536	925	1951	890	175	1065
1912	392	533	925	1952	932	228	1160
1913	394	536	930	1953	958	342	1300
1914	395	530	925	1954	957	483	1440
1915	1315	10	1325	1955	922	613	1535
1916	2770	5	2775	1956	874	686	1560
1917	3676	4	3680	1957	811	729	1540
1918	4226	39	4265	1958	723	747	1470
1919	3859	86	3945	1959	642	713	1355
1920	1419	2036	3455	1960	588	702	1290
1921	614	191	805	1961	542	648	1190
1922	503	277	780	1962	505	550	1055
1923	378	287	665	1963	476	514*	990*
1924	348	307	655	1964	461	389*	850*
1925	347	303	650	1965	456	344*	800*
1926	351	329	680	1966	453	307*	760*
1927	347	333	680	1967	450	235*	685*
1928	345	320	665	1968	440	160*	600*
1929	336	334	670	1969	416	149*	565*
1930	330	345	675	1970	397	143*	540*
1931	320	355	675	1971	388	142*	530*
1932	321	349	670	1972	385	150*	535*
1933	318	342	660	1973	381	159*	540*
1934	319	346	665	1974	367	153*	520*
1935	322	333	655	1975	349	156*	505*
1936	332	333	665				
1937	348	357	705				
1938	366	384	750				
1939	409	476	885				

Source: Tables 2:1, 6:3 (Parts I and II), 6:6 and 6:8 (Parts I and II).

Notes: (a) For details of coverage see notes to Source Tables: Post 1945 'notional' reserves are, in the main, excluded.

(b) All figures are rounded: Reserve strengths have been rounded to give the 'total Reg. + Res.' column figures rounded to the nearest 5000.

\* Army and Air Forces Reserves estimated from the Vote A Establishments totals.

.. Not Available (but negligible). During both World Wars most reserves were embodied.

Table 6:2  
UK Tri-Service Reserve Forces 1900-1975<sup>(a)</sup>  
Actual Strengths each year (000s)

Fin. Year Ending	Reserves				Fin. Year Ending	Reserves			
	Royal Navy	Army <sup>b</sup>	Air Force	Tri- Service <sup>c</sup>		Royal Navy	Army	Air Force	Tri- Service <sup>c</sup>
1900	39.9	375.0	-	415	....	....	....	....	....
1901	39.1	420.0	-	459	1948	..	76.3	2.6	79
1902	39.9	412.0	-	452	1949	3.4	99.1	5.6	108
1903	41.9	440.0	-	482	1950	5.7	127.7	13.3	147
1904	46.1	447.0	-	493	1951	10.1	145.9	19.8	176
1905	54.8	458.0	-	513	1952	19.5	185.6	24.6	230
1906	57.8	475.0	-	533	1953	22.9	291.1	26.6	341
1907	57.3	492.5	-	550	1954	26.4	427.8	28.2	482
1908	56.7	492.0	-	549	1955	26.2	538.9	51.6	617
1909	56.3	427.0	-	483	1956	26.4	586.8	72.5	686
1910	56.1	490.0	-	546	1957	29.7	606.6	92.9	729
1911	55.9	479.0	-	535	1958	30.1	626.5	86.1	743
1912	58.5	476.0	-	535	1959	30.0	648.0	39.0	717
1913	63.0	476.0	-	539	1960	27.9	639.6	30.8	698
1914	..	46.8	-	47	1961	23.2	591.7	34.9	650
1915	..	8.6	-	9	1962	16.2	507.5	29.2	553
1916	..	3.4	-	3	1963	12.6	477 *	25.2	515*
1917	..	3.4	-	3	1964	10.7	356 *	23.0*	390*
1918	..	42.6	-	43	1965	9.9	314 *	21.0*	345*
1919	..	84.0	..	84	1966	9.6	275 *	20.0*	305*
1920	60.4	1968.3	4.9	2034	1967	9.1	208 *	18.0*	235*
1921	59.0	127.8	5.7	192	1968	8.9	134 *	17.0*	160*
1922	61.8	207.6	6.5	276	1969	8.7	125 *	16.0*	150*
1923	66.8	217.3	5.0	289	1970	8.3	122 *	14.5*	145*
1924	67.2	235.0	6.8	309	1971	8.4	123 *	13.5*	145*
1925	66.2	233.6	6.9	307	1972	8.4	128 *	13.5*	150*
1926	65.3	255.7	7.4	328	1973	7.8	140 *	12.5*	160*
1927	65.4	260.4	10.6	336	1974	8.4	136 *	11.0*	155*
1928	62.8	248.3	12.9	324	1975	8.3	137 *	10.0*	155*
1929	62.5	263.2	13.6	339					
1930	60.3	272.0	13.0	345					
1931	60.1	285.0	12.6	358					
1932	59.2	279.8	11.5	351					
1933	59.4	273.4	10.2	343					
1934	59.7	275.7	10.7	346					
1935	59.8	264.1	11.6	336					
1936	57.9	263.2	11.5	333					
1937	58.5	285.3	13.4	357					
1938	59.8	311.4	17.1	388					
1939	61.0	380.1	37.0	478					
1940	62.3	562.1	55.7	680					

**Source:** Tables 6:3 (Parts I and II), 6:6 and 6:8 (Parts I and II).

**Notes:** (a) For details of Reserve Forces see Text. Also See Tables 6:3 - 6:9 Inclusive.

(b) Including Permanent Staff.

(c) Rounded Totals.

\* Estimates.

- Not Applicable (RAF not formed until 1919).

Not Available.

**Table 6:3**  
**UK Royal Navy/Royal Marines (Regular + Reserve) Strengths\***  
**Actual Strengths by Branches of the Total Strength(a)**  
**Part I 1900 - 1940**

Fin. Year Ending	Regular RN/RM Strength (b)	Reserves						Total Reserves	RN/RM Total Strength
		Royal Fleet	Royal Naval (c)	RN Volunteer (c)	Aux. Sick Berth(d)	RN/RM Pensioners (e)			
1900	108590	-	27580	-	380	11950	39910	148500	
1901	112430	-	26750	-	390	11980	39120	151550	
1902	117120	7000	26350	-	390	6200	39940	157060	
1903	121870	9000	26560	-	360	5980	41900	163770	
1904	125950	10880	28330	-	340	6500	46050	172000	
1905	130490	12760	35480	g	370	6190	54800	185290	
1906	127670	15920	34450	g	390	6990	57750	185420	
1907	127430	17520	32250	g	400	7080	57250	184680	
1908	127230	18740	26620	3280	420	7660	56720	183950	
1909	126930	19850	24590	3720	440	7730	56330	183260	
1910	127970	21420	21550	4020	730	8400	56120	184090	
1911	130820	22710	19910	3930	660	8680	55890	186710	
1912	132790	24710	20300	3930	680	8750	58460	191250	
1913	136440	26190	20080	3980	820	8890	59960	196400	
1914	142960	29030	19030	4470	1340	9110	62980	205940	
1915f	199450	..	..	..	..	..	..	199450	
1916f	297010	..	..	..	..	..	..	297010	
1917f	349580	..	..	..	..	..	..	349580	
1918f	406980	..	..	..	..	..	..	406980	
1919f	381310	..	..	..	..	..	..	381310	
1920	176090	33900	10050	..	..	16460	60410	236500	
1921	124010	32010	9130	490	650	16710	59000	183010	
1922	127180	31240	9290	1420	900	19000	61840	189020	
1923	107780	31070	9300	2260	1240	22900	66770	174550	
1924	99110	30400	9330	3030	1270	23170	67200	166310	
1925	99450	29440	8710	3700	1270	23060	66180	165630	
1926	100280	28120	9630	4070	1270	22170	65260	165540	
1927	100790	27090	9800	4290	1270	22900	65350	166140	
1928	101920	24880	9600	4050	1270	22980	62790	164440	
1929	100680	23650	9500	4140	1270	23960	62520	163200	



Table 6:3 (Continued)

1930	99300	22670	9080	4280	1270	23020	60320	159620
1931	94920	21900	8880	4580	1270	23450	60080	155000
1932	92450	21230	9120	4500	1270	23100	59220	151670
1933	89670	20240	9300	4700	1270	23850	59360	149030
1934	89860	18750	9470	4720	1270	25520	59730	149590
1935	91350	16920	9700	4970	1270	26950	59810	151160
1936	94260	15060	9450	4780	1270	27310	57870	152130
1937	99890	..	..	..	..	..	58500	158390
1938	107040	..	..	..	..	..	59800	166840
1939	120000	..	..	..	..	..	61000	181000
1940e	161000	..	..	..	..	..	62300	223300
....	.....	.....	.....	.....	.....	.....	.....	.....

Source: Bibliography Items (3) and (27) and Table 3:1.

Notes: \* For Details of Reserve Forces see Text.

(a) Reserves 1900-1909 1st January each year. 1910-1939 31st March. 1940 30th June. Regulars: Monthly Averages, 1900-1939. June 1940-1945.

(b) cf. Table 3:1 (c). (c) Including Officers.

(d) 1900-1909 Reserve Officers on full or half pay.

(e) Pensioners (RN/RM) under 55 years of age other than those in the Royal Fleet Reserve.

(f) Most Reserves were embodied in the regular forces during 1915-1919 and 1941-1946. Details of those who were not embodied are not available.

(g) Included with Royal Naval Reserve 1905-1907.

.. Not Available

- Not Applicable.

Table 6:3 (Continued)  
UK Royal Navy/Royal Marine Total (Regular + Reserve) Strengths\*  
Actual Strengths by branch of the Total Strength(a)  
Part II 1946-1975

Fin. Year Ending	Regular RN/RM Strength (b)	Reserves					Total	RN/RM Total Strength
		RN/RM Volunteers (c)	RN Reserve (c)	RN Spec Reserve (d)	Female Reserves	(Misc.) (e)		
1946	866000	..	..	-	-	..	..	866000
1947	373200	..	..	-	-	..	..	373200
1948	197800	..	..	-	-	(51500)	..	197800
1949	144750	3440	..	-	-	(54900)	3440	148190
1950	141900	5650	..	-	-	(64600)	5650	147550
1951	138750	7300	2800	-	-	(59500)	10100	148850
1952	141700	9160	3060	7280	-	(49600)	19500	161200
1953	145400	10600	3460	7950	920	(45400)	22930	168330
1954	139700	11750	3740	9630	1250	(48000)	26370	166070
1955	131100	12840	4200	7820	1340	(60100)	26200	157300
1956	125250	13480	4560	7090	1240	(59900)	26370	151620
1957	119050	13190	4740	10630	1160	(64600)	29720	148770
1958	111300	11680	3740	13490	1150	(33500)	30060	141360
1959	103800	14010		14520	1020	(36200)	29550	133350
1960	98150	13380		13480	1010	(35900)	27870	126020
1961	94800	12770		9360	1020	(35400)	23160	117960
1962	95050	10580		4620	980	(34200)	16180	111230
1963	95800	9900		1690	1000	(30900)	12590	108390
1964	96700	9180		500	980	(..)	10660	107360
1965	97600	8780		80	1040	(..)	9900	107500
1966	98200	8530		10	1050	(27500)	9590	107790
1967	97400	8050		-	1000	(28000)	9080	106480
1968	96000	7960		-	970	(28000)	8930	104930
1969	92800	7800		-	910	(30800)	8710	101310
1970	87150	7510		-	810	(24000)	8320	95470
1971	84300	7500		-	900	(24200)	8400	92700
1972	82450	7400		-	1000	(26300)	8400	90850
1973	81230	6900		-	900	(27600)	7800	89030
1974	79750	7400		-	1000	(28100)	8400	88150
1975	78800	7400		-	900	(28000)	8300	87100

Table 6:3 (Continued)

Source: Bibliography Items (1), (3) and (27)

Notes: \* For Details of Reserve Forces see Text.

(a) Reserves: 1st January each year (except 'Misc.' which is not dated and 1974 which are April).

(b) cf. Table 3:1 Col. 3,

(c) 'Effective' Reserves: All volunteers, mainly from Regular RN Service, but some from National Service with the RN.

(d) National Servicemen Reserves only. (Limited training and call-up requirements).

(e) 'Notional' Reserves: ex-servicemen (Regular or National Service) not in the Volunteer reserves and not required to train but with a residual legal liability to early call up into the armed forces in the event of an emergency. These 'Misc.' reserves are not included in the reserves total. (Female RN 'Misc.' reserves are included in this column).

- Not Applicable or zero .. Not Available.



Table 6:4  
UK Royal Navy/Royal Marines Total (Regulars + Reserves) Strength\*  
Establishments and Actual Strengths Selected Years(a,b,c)  
By Branches of the Service

Branch of the Service	1899/1900		1909/1910		1924/1925		1934/1935		1950/1951		1960/1961		1970/1971	
	Act.	Estb.	Act.	Estb.	Act.	Estb.	Act.	Estb.	Act.	Estb.	Act.	Estb.	Act.	Estb.
RN	86350	88150	107220	107130	89000	90631	81130	82812	130245		93045		76300	81600
RM	18140	18290	17520	17603	10170	9869	9340	9526	12755		8955		7300	8400
Coast Guard	4100	4200	3230	3267	-	-	-	-	-	-	-	-	-	-
Royal Marine Police	-	-	-	-	290	287	880	884	-	-	-	-	-	-
Total Regular Forces	108590	110640	127970	128000	99450	100787	91350	93222	138750	143000	94800	102000	84300	90000
Royal Fleet Reserve	..	..	21420	22950	29440		16920	17040		25000		5000	..	..
Royal Naval Reserve	27960	28650	21550	23500	8710		9700	4800		6960		..	..	..
RN/RM Volunteer Reserve	..	..	4020	3700	3700		4970	5300	69600	10260	49200	14400	>32600	..
Aux. Sick Birth Reserve	..	..	730	..	1270	1270	1270	1270	(d)	(d)			..	..
Pensioners RN/RM Under 55	11950	11910	8400	7020	23060		26950	..	..	..	9400	500	-	..
Special Reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total RN Total Strength	148500	151200	184090	185170	165630		149590	..	208350	..	153400	..	116900	..

Source: Bibliography Items (1), (3), (10), (27) and (39)

Notes: \* For details of Reserve Forces see Text.

- (a) Reserves includes 'Notional' Reserves i.e. ex-servicemen who have not volunteered as reserves. Such personnel have a residual legal reserve obligation but do not train in normal times. (See also Table 6:3 Part II).
- (b) The actuals figures quoted are illustrative rather than exact. The various branches of the Service were not counted on the same day or days each year; data from different months in the year have been amalgamated together.
- (c) Reserve Establishments post 1945 include only those personnel for whom provision is made in the Navy Estimate.
- (d) Included with RN Volunteer Reserve.

- Zero or Inapplicable .. Not Available.

Table 6:5

UK Army Total Strengths: Regulars and Reservists  
Various Years Actuals and Establishments  
Part I 1900 - 1938

Section of the Total Strength	1899/1900		1909/1910		1923/1924		1930/1931		1937/1938	
	Actuals	Estb.	Actuals	Estb.	Actuals	Estb.	Actuals	Estb.	Actuals	Estb.
Non Regimental Establishment(a)	8300	8544	6000	6205	7600	7454	8000	8064	8500	8786
UK Regimental Establishment(b)	192400	331309	175500	175955	146700	163346	127500	140836	134000	160114
India Regimental Establishment	70100	73157	77050	76009	66300	71109	59470	59915	55840	57045
Total Regular Army	270800	413370	258550	259209	220600	241909	194970	208815	198340	225945
Territorial Army(c)	238000	274600	271400	312901	140700	180091	135000	159500	155300	201455
Total Regular Army + TA	508800	687970	529950	572110	361300	422000	329970	378315	353640	427400
Army Reserve	24100	90000	134000	137000	85600	84000	130600	132200	122800	131500
Special/Supplementary Reserves(d)	-	-	70500	90700	-	-	16400	23600	23750	50750
Militia(e)	106200	131700	109000	7600	2400	1850	850	1420	980	1110
Officer Training Corps(f)	-	-	520	760	900	1200	880	1205	830	940
UK Army Total Regulars + Reserves Strengths(g)	639100	909670	745870	808170	450200	509050	478700	536740	502000	611700

Source: Bibliography Items (1), (3), (4) and (39)

Notes: (a) i.e. Staff and Departments and Miscellaneous Establishments (Including permanent staff of the various Reserve Forces).

(b) i.e. Home and Colonial Regiments - including all Supplementary and War Numbers - constituting the Regular Army (Regimental) exclusive of India.

(c) Exclusive of Permanent Staff (Unlike in Table 6:6)

'Territorial Army' = Yeomanry and Volunteers 1900 - 1903.

Territorial Force 1909 - 1914. Territorial Army from 1920. (1923/24 total excludes 4100 Territorial Army (Officer) Reserves).

(d) Exclusive of Permanent Staff. Special Reserve constituted Dec. 1907. Supplementary Reserve constituted in 1925.

(e) Exclusive of Permanent Staff: UK, Channel Isles, Malta and Bermuda Militia including Militia Reserve.

(f) Exclusive of Permanent Staff. CTC was constituted Dec. 1908: Numbers quoted are officers only.

(g) The Totals shown here are similar to the sum totals of the relevant columns of Tables 4:1 and 6:8

The differences result mainly from the inclusion of Reserve Permanent Staff both in Regular and Reserve Establishments in those tables.

Table 6:5 (Continued)

UK Army Total Strength: Regulars and Reservists  
Various Years Actuals and Establishments(a)  
Part II 1948 - 1975

Section of the Total Strength	1947/1948 Actuals Estb.	1950/1951 Actuals Estb.	1955/1956 Actuals Estb.	1960/1961 Actuals Estb.	1965/1966 Actuals Estb.	1970/1971 Actuals Estb.	1974/1975 Actuals Estb.
Regular Army	986.1	1210.0	491.4	283.3	224.0	195.2	173.0
Territorial Army Males(b)	18.6	152.9	274.6	255.8	102.8	51.7	58.3
Total Army + TA	1004.7	1362.9	766.0	539.1	326.8	246.9	231.3
TA Reserve of Officers	-	9.3	16.6	17.9	*	*	*
Regular Reserves(c)	55.7	71.0	101.7	155.7	40.0	117.4	107.6
Army Emergency Reserve	-	1.6	180.9	149.5	24.7	-	-
Army Officers Emerg. Res.	-	2.1	3.9	3.8	*	-	-
WRAC Reserves(d)	2.0	20.0	7.4	7.1	4.0	2.9	3.6
QARANC Reserves(d)	-	-	1.7	1.9	0.3	*	*
Total Army + Reserves Strength(e)	1062.4	1453.9	1078.2	875.0	566.8	..	342.8
			1157.4	988.4	..	351.0	352.5

Source: Bibliography Items (1), (3), (8) and (27).

Notes: (a) Establishments cover only those reserves on whom the Army expect to incur expenditure during the financial year. Thus discrepancies can arise between 'Actuals' - i.e. personnel known to be 'on the books' - and establishments - essentially first call reservists.

(b) Including Male members of the Ulster Defence Regiment in 1970/71 (4000) and 1974/75 (7,200) and T.A. Reserves (ORs) of 5000 in 1965/66. From 1967/68 the T.A. was reformed as the Territorial and Army Volunteer Reserve (T & AVR) in which the Army Emergency Reserve was incorporated. From 1965/66 the establishment Total includes female T.As.

(c) 1947/48 Establishment = Royal Army Reserve. 1950/51 figure includes the Supplementary Regular Reserve. From 1960/61 the comments of note (a) apply. The figures exclude the Army General Reserve (AGR) for all years. In 1970/71 this notional reserve was assessed at 174,400 'Actuals'. The AGR ceased to exist on 30th June 1974.

(d) Territorial + Army Emergency Reserves.

(e) Totals exclude the Home Guard which functioned 1953 - 1958.

- Zero .. Not Available.

\* Included in the main item of the relevant section.



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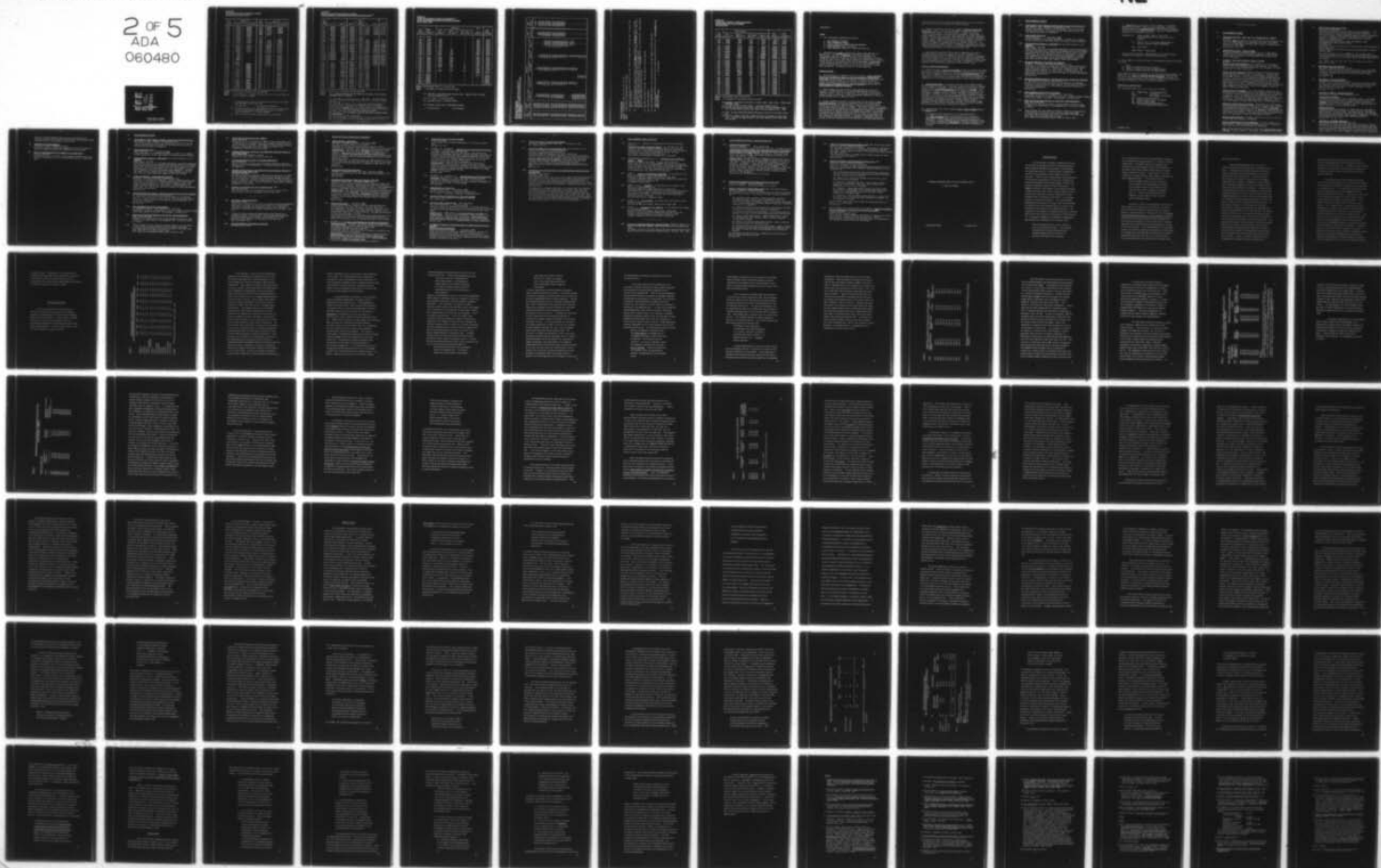
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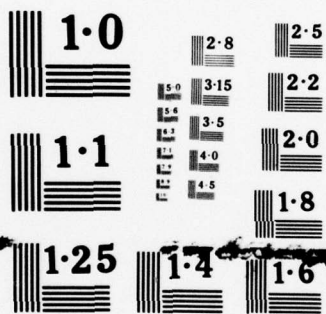
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**Table 6:6**  
**UK Army Reserve Forces 1899/1900 - 1974/75**  
**Establishment and Effectives\*+**

Fin. Year Ending	Reserves(a)		Fin. Year Ending	Reserves	
	Actuals	Establishment		Actuals	Establishment
1900	375000	503000	1936	263200	317200
1901	420000	506500	1937	285300	332600
1902	412000	687700	1938	311400	387600
1903	440000	649300	1939	380100	404800
1904	447000	641700	1940	562100	-
1905	458000	602500	....	.....	.....
1906	475000	621000	1946	-	-
1907	492500	635000	1947	..	90000
1908	492000	638000	1948	76300	243880
1909	427000	546000	1949	99100	198000
1910	490000	553000	1950	127700	201000
1911	479000	545500	1951	145900	204000
1912	476000	551000	1952	185600	382200
1913	476000	549000	1953	291100	527750
1914	468000	543000	1954	427800	512900
1915	8600	-	1955	538900	572400
1916	3400	-	1956	586800	634400
1917	3400	-	1957	606600	706000
1918	42800	-	1958	626500	670000
1919	84000	-	1959	648000	661800
1920	1968300	-	1960	639600	702400
1921	127800	562400	1961	591700	671365
1922	207600	362200	1962	507500	613700
1923	217300	309300	1963	..	465000
1924	235000	278700	1964	..	432000
1925	233600	309100	1965	..	374000
1926	255700	312400	1966	..	329000
1927	260400	310100	1967	..	247350
1928	248300	308000	1968	..	160000
1929	263200	318500	1969	..	151000
1930	272000	329500	1970	..	134000
1931	285000	329700	1971	..	141000
1932	279800	324000	1972	..	156500
1933	273400	324800	1973	..	165500
1934	275700	324300	1974	..	165500
1935	264100	318100	1975	..	164000

**Source:** Bibliography Items (3), (4), (8) and (27)

**Notes:** \* For details of the nature and functions of the various different types of reserves see **Text**.

+ For more detailed analyses of Army Reserve Forces see also Tables 6:4, 6:5 (Parts I & II) and 6:7.

.. Not Available - No Maximum Establishment.

(a) 'Actuals' includes, but 'establishment' excludes permanent staff of the various Reserve Forces (who form part of the Regular Army Establishment). All figures rounded.

(b) 1915 - 1919 Most 'Reserves' were called up or mobilised.



Table 6:7

UK Army Reserve Forces 1899/1900 - 1974/75

Actual Strengths: Territorial Army and Other Reserve Forces <sup>(a)</sup>

Fin. Year Ending	T.A. <sup>(b,c)</sup>	Other <sup>(d)</sup>	Total <sup>(e)</sup>	Fin. Year Ending	T.A.	Other	Total <sup>(e)</sup>
1900	240000	135000	375000	1936	131600	131600	263200
1901	288100	131900	420000	1937	141900	143400	285300
1902	363500	108500	412000	1938	157300	154100	311400
1903	291000	149000	440000	1939	287500	92600	380100
1904	279700	167300	447000	1940	407400	154700	562100
1905	281000	177000	458000	....	.....	.....	.....
1906	274800	200200	475000	1946	-	-	-
1907	281200	211300	492500	1947	..	..	..
1908	278300	213700	492000	1948	18600	57700	76300
1909	199600	227400	427000	1949	43200	55900	99100
1910	272500	217500	490000	1950	69000	58700	127700
1911	269600	209400	479000	1951	77700	68200	145900
1912	266700	209300	476000	1952	110000	75600	185600
1913	264000	212000	476000	1953	170900	120200	291100
1914	248300	219700	468000	1954	223300	204500	427800
1915f	(366900)	8600	8600	1955	280600	258300	538900
1916f	(736500)	3400	3400	1956	274600	312200	586800
1917f	(988900)	3400	3400	1957	250300	356300	606600
1918f	(784500)	42600	42600	1958	241100	385400	626500
1919f	(796800)	84000	84000	1959	248900	399100	648000
1920	..	1968300	1968300	1960	253800	385800	639600
1921	62300	64500	127800	1961	255800	335900	591700
1922	137000	70600	207600	1962	169400	338100	507500
1923	136600	80700	217300	1963	157800	..	..
1924	142400	92600	235000	1964	131500	..	..
1925	144600	89000	233600	1965	120000	..	..
1926	147500	108200	255700	1966	102800	..	..
1927	148700	111700	260400	1967	79100	..	..
1928	141700	106600	248300	1968	39900	..	..
1929	141500	121700	263200	1969	39800	..	..
1930	138600	133400	272000	1970	45400	..	..
1931	137100	147900	285000	1971	51700	..	..
1932	140000	139800	279800	1972	61100	..	..
1933	128800	144600	273400	1973	66200	..	..
1934	136100	139600	275700	1974	62900	..	..
1935	133700	130400	264100	1975	58300	..	..

Source: Bibliography Items, (3), (4), (8) and (27).

Notes: (a) See Text for details of the nature and functions of the various different types of reserves.

(b) 1900-1939 1st October each year. 1940 March. 1948-1963 30 June each year. 1964-1973 and 1975 1st Jan each year. 1974 April Average 1973 and 1974.

(c) Inclusive of Permanent Staff throughout: 1900-1908 Yeomanry and Volunteer reserve. Thereafter (to 1968) Territorial Force/Army.

Post WW2 Table excludes Women T.A. Forces. From 1968 Territorial and Army Volunteer Reserve but excluding Category III (which was disbanded in 1969). From 1971 T & AVR + the Ulster Defence Regiment.

(d) See Tables 6:4, 6:5 (Parts I and II) and 6:6 for further details of Army Reserves.

(e) cf. Actuals Column of Table 6:6.

(f) Notional Totals. T.A.s were called up in October 1914 and from then until 1919 constituted a part of the Regular Army. See Table 4:11.

.. Not Available

- Not Applicable.

Table 6:8

UK RAF Total (Regular + Reserve) Strengths\*(a)

Actual Strengths by branches of the Total Strengths

Part I 1919 - 1945

Fin. Year Ending	Regular RAF Strength (b)	Reserves			Total All Reserves	RAF Total Strength
		RAF Reserve (c)	Spec. + Aux. Res. (d)	Aux. A.F. Res. of Os. (d)		
1919	291748	..	-	-	..	..
1920	77880	4865	-	-	4870	82750
1921	24870	5682	-	-	5680	30550
1922	27350	6492	-	-	6490	33840
1923	28300	5041	-	-	5040	33340
1924	28460	6782	-	-	6780	35240
1925	30330	6927	-	-	6930	37260
1926	31690	7174	187	-	7360	39050
1927	30640	10249	361	-	10610	41250
1928	28140	12045	807	-	12850	40990
1929	28890	12621	1013	-	13630	42520
1930	29240	11892	1130	-	13020	42260
1931	29980	11390	1255	-	12640	42620
1932	30260	10120	1358	-	11480	41740
1933	29520	8763	1394	-	10160	39680
1934	28470	9124	1513	8	10650	39120
1935	28780	10058	1536	16	11610	40390
1936	35940	9927	1559	26	11510	47450
1937	48580	..	..	..	13400	61980
1938	60370	13000	4000	100	17100	77470
1939	83030	..	..	..	37000	120030
1940	120000	..	..	..	55700	175700
1941	303800	-	-	-	-	303800
1942	702800	-	-	-	-	702800
1943	966500	-	-	-	-	966500
1944	1155500	-	-	-	-	1155500
1945	1187100	-	-	-	-	1187100

**Source:** Bibliography Items (1), (3) and (39)**Notes:** \* For Details of Reserve forces see Text.

(a) Reserves at 31st March each financial year. Regular forces, average over the financial year.

(b) cf. Table 5:1 Actuals Column.

(c) Reserves liable to overseas service.

(d) Reserves liable only to Home Defence Duties.

- Not Applicable

.. Not Available.

**Table 6:8 (Continued)**  
**UK RAF Total (Regular + Reserve) Strengths\*(a)**  
**Actual Strengths by branches of the Total Strength**  
**Part II 1945-1975**

Fin. Year Ending	Regular RAF Strength	Reserves					Total All Reserves	RAF Total Strength
		Regular (b)	Volunteer (c)	Auxiliary (d)	Females (e)	Misc. (f)		
1946	1117000	-	-	-	-	-	-	1117000
1947	537080	..	..	..	-	-	..	..
1948	327985	1400	600	600	-	-	2600	330585
1949	273635	1400	2300	1700	200	-	5600	279235
1950	242110	1800	6300	3600	1600	-	13300	255410
1951	241000	3900	8500	4700	2700	(..)	19800	260800
1952	260500	4900	10700	5600	3400	(17600)	24600	285100
1953	283850	5200	11700	6300	3400	(59600)	28600	310450
1954	281260	6700	11700	6500	3300	(100100)	28200	309460
1955	269445	30700	11700	6400	2800	(142700)	51600	321045
1956	257190	54400	9600	6100	2400	(134400)	72500	329690
1957	241205	77300	7600	6000	2000	(123500)	92900	334105
1958	214315	75800	6400	2300	1600	(117500)	86100	300415
1959	185930	30800	5200	1700	1300	(139500)	39000	224930
1960	171825	24500	4300	1100	900	(124400)	30800	202625
1961	163920	29900	3300	900	800	(94900)	34900	198820
1962	156035	25800	2400	400	600	(63700)	29200	185235
1963	148455	23400	1900	400	500	(40200)	25200	173655
1964	141405	..	1070	360	150	(21030)	..	..
1965	134920	..	790	300	130	(11870)	..	..
1966	130340	..	740	230	100	(3210)	..	..
1967	126805	..	780	200	90	(1010)	..	..
1968	123470	(81700)	740	200	90	(850)	..	..
1969	118230	(83900)	660	190	80	-	..	..
1970	114560	(32600)	470	180	90	-	..	..
1971	113675	(32200)			100	-	..	..
1972	112365	(32500)	300		100	-	..	..
1973	109240	(31800)	200		100	-	..	..
1974	103225	(30800)	200		100	-	..	..
1975	97500	(30900)	200		100	-	..	..



Table 6:8 (Continued)

Source: Bibliography Items (1), (3), (8) and (27).

Notes: \* [For details of Reserve Forces See Text.]

- (a) Reserves at 30th June each Financial Year 1948 - 1963, 1st January 1964 - 1973 and 1975 1st April 1974.  
Regulars, see Table
- (b) 1947-1963 RAF Reserves who could be required to attend annual training on a continuous basis. Excludes National Service Officers and Class H. Airmen Reserves (listed in the table as 'Miscellaneous') who could be required to attend annual training but not on a continuous basis.  
1968-1975: The number of past RAF servicemen still notionally liable for reserve service. These reserves are not normally required to attend training.
- (c) Reserves previously in the RAF: may be required to attend training.
- (d) Territorial Reserves.
- (e) WRAF and PMRAFNS Reserves of all types and ranks: Excludes 'Regular' Reserves 1968-1975.
- (f) National Servicemen Officers Reserve and Class H Airmen Reserve (See also note b.): Not included in the total strength  
- Zero or not applicable .. Not Available.

Table 6:9

UK RAF Total (Regular + Reserve) Strengths\*  
Establishment and Actual Strengths  
Selected Years.

Fin. Year Ending	Establishment				Total Estb. Strength	Total Actual Strength (e)
	RAF Regulars (a)	Regular Reserves (b)	Auxiliary Reserves (c)	Total Reserves (d)		
1931	32000	12550	2100	14650	46650	42620
1936	45000	13250	1960	15210	60210	47450
1939	96000	31000	9460	40460	136460	120030
....	.....	.....	....	.....	.....	.....
1948	370000	60000	12000	72000	442000	330585
1949	325000	21500	14500	36000	361000	279235
1950	255000	27000	20000	47000	302000	255410
1951	243000	56000	20000	76000	319000	280325
1952	285000	76800	13100	89900	374900	326050
1953	315000	109000	12500	127000	442000	374575
1954	302000	155000	11000	166000	468000	409560
1955	288000	194000	11300	205300	493300	463745
1956	272000	214300	9500	241000	513000	464090
1957	257000	235000	11000	246000	503000	457605
1958	240000	224000	9000	233000	473000	417915
1959	203000	215000	5000	220000	423000	364430
1960	180000	188400	4100	192500	372500	327025
1961	174000	171100	3400	174500	348500	293720
1962	164000	122350	1900	124250	288250	248935
1963	154000	87350	2200	89550	243550	213855
1964	148000	61840	1200	63040	211040	..
1965	140000	44240	1260	45500	185500	..
1966	136000	29130	790	29920	165920	..
1967	131000	21655	600	22255	153255	..
1968	128000	19620	600	20220	148220	..
1969	125000	17720	600	18320	143320	..
1970	118000	15310	435	15745	133745	..
1971	115400	14494	384	14878	130278	..
1972	113900	14385	400	14785	128685	..
1973	113500	13590	400	13990	127490	..
1974	110000	11890	400	12390	122390	..
1975	104000	10600	400	11000	115000	..

Source: Bibliography Items (3) and (10).

Notes: \* For Details of the Reserve Forces see text.

(a) Includes supplementary estimates of 12000 (1936), 13000 (1939), 28000 (1950) and 15000 (1951).

(b) Includes the RAF Volunteer Reserve: Excludes Permanent Staff.

(c) Includes the Special Reserve 1931, 1936, 1939: Excludes Permanent Staff. Also includes Class H and National Service Officer Reserves 1951 - 1968.

(d) 1953: Includes 5500 Miscellaneous Reserves called up for Training in that year.

(e) This total differs from that in Table 6:8 (Part II) because in that table 'Misc.' reserves are not included in the Table whereas in this table they are included.

## BIBLIOGRAPHY

### Layout

1. The bibliography comprises five sections:

- A. MAIN DOCUMENTARY SOURCES
- B. OTHER DOCUMENTARY SOURCES
- C. GENERAL STATISTICAL COMPILATIONS AND ABSTRACTS
- D. OTHER REFERENCES (open literature)
- E. OTHER REFERENCES (official: limited availability)

2. References are arranged alphabetically within these sections, as a general rule; but they are numbered consecutively throughout the bibliography. Entries include a short note on each reference. For documentary sources and statistical abstracts this incorporates a listing of the data they contain, with special emphasis on defence-related statistics. (Those relevant to the present collection are highlighted by underlining in the listings for general sources in section C). Some comment on the relative accessibility and utility of the various publications is given where appropriate. Complementary material is cross-referred.

### Purpose and Scope

3. The bibliography is intended to serve as a guide to basic statistical material on the manpower aspects of the United Kingdom's defence effort since 1900, including the Civilian personnel associated with defence as well as the Armed Forces themselves. In addition it contains entries for a number of statistical publications, official and private, which contain general social and economic data on the United Kingdom that are useful to give perspective to defence statistics.

4. Taken together the works cited provide comprehensive statistical evidence on, and elucidation of, the main defence manpower trends of the twentieth century. But, for the most part, only official (or officially sponsored) work is noted here. Numerous monographs embodying the results of private research exist in addition to this.

5. Broadly speaking, sections A, B and E below list the sources of basic statistical material. With only one exception (12) all the references in Sections A and B are Parliamentary Papers. They are the primary sources for the major statistical series on defence. The entries in section A include the principal official reports and accounts of the various defence organisations. Those in section B identify Sources of complementary information for limited time periods or for specific aspects of defence activity only. Papers cited in section E would be grouped with those in A or B were it not for the fact that they are not generally available in the open literature and hence, are less accessible to the general reader or researcher. (Needless to say the entries in section E record only a tiny fraction of such unpublished material:



the items listed are those used in the present abstract to fill significant gaps for which no runs of published data could be found).

6. Section C contains the entries for sources of general economic and social data. Most of these too are Government publications, but not all are Parliamentary Papers (see para 8 below). A number of important 'defence' series appear in the compilations cited here; series which, if issued separately, would have been listed under Main (or Other) Documentary Sources. But the works included in this section are essentially secondary sources in which information culled from a variety of places is conveniently brought together. Where a need arises to set relevant defence data in relation to population, working population or national output etc., they are useful sources of summary series of demographic, employment and national income statistics making it unnecessary to consult numerous primary sources - detailed Census documents, labour statistics and so on.

7. The works cited in section D constitute a miscellany of sources of information which, though not eligible for inclusion elsewhere, are nevertheless necessary for the composition of a full statistical background to British defence activity in the period 1900-75. There are entries here for certain volumes of the Official Histories of the World Wars which contain data and explanatory material such as is found in Statements on the Defence Estimates (and the Estimates themselves) in more tranquil times.

#### Guide to Sources (Parliamentary)

8. Entries relating to books and monographs contain full publication details and present the would-be user with no problems of identification or location. Most of the references, however, are to British Parliamentary Papers; and the researcher unfamiliar with these materials may encounter such problems, especially if constrained to use bound volumes containing many documents. The information in the following paragraphs may be of value in this connection.

9. Parliamentary Papers is a generic term for all the documents which record the non-oral business of the House of Lords and the House of Commons - the two chambers of Parliament. (The oral business is on the record in the Official Report, Parliamentary Debates, popularly known as Hansard). The documents are issued, as individual papers in several series, more or less continuously throughout the year. However the Papers of each Session of Parliament - normally, but not invariably, running from November to October - are bound into a set of volumes of Parliamentary Papers and it is in this form that library holdings are customarily kept, both in the United Kingdom and elsewhere. The Official Index of a Sessional Volume includes a pagination running through that Volume; but most library copies are not re-paginated in this way and items within volumes are located by content. This is one potential source of difficulty in location.

10. The Papers fall into three categories Bills, House of Commons Papers, and Command Papers.

(a) Bills are draft legislation and are designated 'Bills'.

(b) House of Commons Papers comprise Reports from Parliamentary Committees (or Commissioners whose authority derives from Act of Parliament). They are designated HC and numbered consecutively (from 1) in order of presentation each Session. (Thus HC 1 (1966-67) is the first House of Commons Paper presented in the 1966-67 Parliamentary Session).

B. OTHER DOCUMENTARY SOURCES

- (11) Annual Report of the Inspector General of Recruiting, (Army and Militia)  
Cmd. Annual to 1904. Thereafter incorporated in (4)  
Contents are similar to those of the 'Recruitment' sections of pre WW1  
'General Annual Reports on the Army' (4) but statistical sections are  
less detailed and often not comparable.
- (12) Civil Service Statistics  
Annual from 1970 Published by HMSO  
Civilian Employment in Government Departments. Volumes vary in degree  
of detail given but all have some material on Defence Civilian Employees.
- (13) Estimates/Supply Estimates: Memorandum (by the Chief Secretary to the  
Treasury:  
Cmd. Annual: Post WW2  
Useful summary source of all Government Departments' Estimated Expenditures  
each year, analysing Public Expenditure by programme with ten year summary  
tables (most years) and some limited details of certain types of Civilian  
Employees of the various departments and of the relationship of current  
public expenditure with past and planned future expenditure. Provides  
very useful ten year summary series of the Defence Budget and the Air,  
Army, Navy and Central Department budgets by main Vote headings.
- (14) Estimates Committee: (Sub Committees' Reports)  
HC Papers. (To Session 1969-1970, Thereafter See (15))  
Forerunner of the Expenditure Committee: Reports on Defence matters tend  
to be short of hard facts and illuminating statistics but often contain  
useful explanatory material on a wide variety of Defence topics. HC  
53/300 of session 1969-1970 is a major report on 'Recruitment for the  
Armed Forces' and contains some statistical material on Recruitment-Numbers,  
Expenditures and Activities.  
See also (15)
- (15) Expenditure Committee Reports: Defence and External Affairs Sub- Committee  
HC (Intermittent Publications from 1970-1971).  
In recent years various reports from this Sub-Committee have embodied  
material on a wide variety of defence topics. For the purposes of general  
statistical compilation HC 141 (1971-1972) and HC 259 (1974-1975) are  
particularly informative.  
See also (14)
- (16) Naval Expenditure (Principal Naval Powers):  
HC Intermittent Series: Last number HC 410, (1913-1914)  
Expenditure, adjusted to be comparable, of Austria - Hungary, Germany, France,  
Italy, Japan, Russia, UK and USA. Also Manpower. Ten year runs.
- (17) Report of the Advisory Committee on Recruiting (The Grigg Report)  
Cmd. 545 October 1958  
Examination of "the factors bearing on the willingness of men and women  
to serve in the Armed Forces", and recommendations. Statistical content  
is limited.
- (18) "Return showing the total numbers of Officers and Men in the Land Forces  
of Great Britain and Ireland, France, Austria, Russia and Germany  
(including Prussia) respectively in each of the years 1792, 1800, 1805,  
1815, 1840, 1854, 1870, 1880, 1900 and 1906".  
HC 67 (1908) (In Parliamentary Papers (1908) Vol LXIV p. 955).

(c) Command Papers are Reports, policy statements or information presented by a Minister - that is, by the Government. They are numbered consecutively through Sessions. Four numeration sequences have been used in Parliamentary Papers to date and a Command Paper's designation is determined by this viz.

Designation C. issued to 1899. (Thus C. 150 is the 150th Command Paper of the nineteenth century sequence.

Cd. 1900-18 (Cd 1 is the first Command Paper of this set, issued in Session 1899-1900).

Cmd. 1919-1955(6)

Cmd. 1955(6) - (continuing).

Unlike HC Papers therefore, Command Papers can be located without reference to the Session in which they were presented.

11. Until 1968-69 the Sessional Volumes of Parliamentary Papers were ordered as follows:

- I Bills
- II Reports of Committees (mainly HC papers)
- III Reports of Commissioners (mainly Command Papers)
- IV Accounts and Papers (both HC and Command Papers)

Since 1969-70 the distinctions among II, III and IV have been abandoned: the Volumes are now: Bills and Reports, Accounts and Papers. Most, but not all, of the pre-1969-70 Papers cited in this bibliography fall into the 'Accounts and Papers' element of the Sessional Volumes: those which do not are usually identifiable as Reports from their long title.

#### Explanation of Abbreviations

12. The abbreviations used in the entries are as follows:

Cd.	Command Paper	(1900-18 designation)
Cmd.	"	(1919-55(6) " )
Cmd.	"	(post 1955(6) and current)
CSO	Central Statistical Office	
FY	Financial Year	(1 April - 31 March)
HC	House of Commons Paper	
HMSO	Her Majesty's Stationery Office	
	(i.e. the Government Printing Office).	



## B I B L I O G R A P H Y

### A. MAIN DOCUMENTARY SOURCES

- (1) Appropriation Account Army, Navy, Air, Defence Central, Defence:  
HC Annual  
Details of Actual Expenditures by sub-headings within Vote Headings with total sums voted alongside for comparison. Also Vote A (Manpower)  
Outturns: Average Monthly Strengths (most pre WW2) or maximum numbers borne each FY. (Post WW2)  
See also (2) (12) (31)
- (2) Appropriation Account - Votes of Credit:  
HC papers published during WW1 and WW2 in lieu of (1) when normal budgeting and auditing were temporarily suspended: Actual Wartime expenditures by Army Navy and Air Departments and War Expenditures of Civil Departments.
- (3) Estimates Army, Navy, Air, Defence (Central), Defence:  
HC Annual  
Details of Estimated expenditure to be incurred in the forthcoming financial year, by sub-headings within Vote headings. Also details of the previous years estimated expenditure; and, sometimes, of Actual Expenditures for other recent years.  
  
Details of Vote A (Manpower) Maximum authorised strengths each year, usually with previous years figures for comparison. Coverage varies between Services but all include: Total Strength by Branches (e.g. RN, RM, WRNS, QARANC); Officer-Other Rank and Officer-Other Rank sub-divisions; Reserve force Establishments by Branches of the Reserves. Pre-WW2 Actual Strength figures at a reference date are also shown. Army Estimates also include a Geographical location analysis and for most pre-WW2 years an Arm of Service analysis by Main rank sub-divisions. Army and Navy Estimates present a Total Force (Regulars + Reserves) analysis for most pre-WW2 years.  
  
Details of Civilian employees: Pre- WW2 coverage is patchy even for Non-Industrials: Post-WW2 coverage is very extensive, but until 1963-64 the data are spread over numerous Votes and Appendices and are difficult to aggregate. Even after 1963-64 the data are not easy to follow. Coverage is by Branch of the Service (to 1970); by major functions within each Service; by Industrials (post WW2) and Non Industrials; by UK and Locally Engaged Civilians (LECs) (post WW2); and occasionally by sex.  
  
Details of Service Pay and Allowances: Each Service for ranks, grades, skills and years in the service. Data are for 'representative' personnel and although comprehensive are only suitable for study of individual rank/skill/service configurations, not for aggregate averages of any type. Average pay and allowances of Officers and Other Ranks (and occasionally some sub-divisions thereof) can be calculated from data presented in the body of the main Regular forces Pay Votes (usually Votes 1).  
  
Details of Reserve Forces: functions, liability for call-up, liability for training, also historical antecedents.  
  
Details of Expenditure by Civil Departments (on Civil Votes) for the defence effort. (Rates, Postage, Publishing and so on); Available for each branch of the Services separately for most years.  
  
Note Defence Estimates are currently listed under Supply Estimates Class I Defence (formerly Class XII) (HC Annual) See Also (1) (5) - (9).

- (4) General Annual Report on the Army:  
Cmd. Annual to 1938-1939:  
From 1906 incorporates the Annual Report on (Army) Recruitment. Covers numerous aspects of Army activity of which the main items are:  
Recruiting (Numbers, Terms of enlistment, Ages, enlistments by regiments and areas of origin); Establishment and Strength (Total including reserves, by regiments, by ranks, increase-decrease, location);  
Reliefs and Re-enforcements:  
Services and Ages (Past Service, Terms of Engagement, Ages):  
Re-engagements, Extensions and Pensions:  
Courts-Martial:  
Nationality, Religion and Education (of both recruits and Establishments):  
Horses, Mules etc.:  
Army and Supplementary Reserves, Territorial Army (Strength, increase-decrease, ages).  
  
Note that the above list is not exhaustive, that coverage varied slightly from Report to Report and that both UK and India establishments are included but nearly all the tables analyse only Other Ranks profiles, not officers.  
  
Note: Most tables have back-runs of data covering up to 10 years.  
See also (11) (48)
- (5) Memorandum on the Air Estimates:  
Cmd. Annual 1920-1963 Thereafter see (8)  
Pre-WW2, a review of policy and events with little or no statistical content but occasional insights into Air Department organisations and activities. Post-WW2 some limited statistical content, notably recruitment data.  
See also (7) (8)
- (6) Memorandum on the Army Estimates:  
Cmd. Annual to 1963 Thereafter see (8)  
Pre-WW2, a review of policy and events with little statistical content but occasional insights into War Office organisations and activities. Post-WW2 some statistical content, notably recruitment and Army Manpower composition analyses.  
See also (7) (8)
- (7) Statement on Defence - Defence Statistics:  
Cmd. Annual: Post War to 1963 Thereafter see (8)  
  
The Statement on Defence  
A review of policy and the overall performance, finance, functioning and operating of the Armed Forces. Some statistical content in the Statement itself (notably overall expenditure data) but changes in composition result in many incomplete or 'one-off' series of data and Defence Statistics is a more reliable source.  
  
Defence Statistics  
Occasionally published separately as a Cmd. paper but more usually forming an annex to the Statement: Coverage included: Strengths (by Males, Females, and National Servicemen) Reserves (by type), Defence Budget (by principal headings: pay, movements, supplies etc.); Finance (by Departments) and Civil Departments Defence Expenditure.  
See also (5) (6) (8) (9)
- (8) Statement on the Defence Estimates:  
Cmd. Annual from 1964. (Not published 1974).  
Incorporates all the material previously found separately in sources (5), (6), (7) and (9). The statistical section was expanded 1964-1969, contracted and considerably modified 1970-1973 and further modified but greatly expanded 1975. Consistent series are therefore few but in one form or another, recruitment, strengths, reserves, finance, geographical

location, civilian strengths, Service and civilian personnel by functions, expenditure by functions and many other miscellaneous aspects of Defence Activity are presented in fair detail.

(9) Statement on the Navy Estimates

Cmd. Annual to 1963. Thereafter see (8)

A review of policy and events with negligible statistical content but occasional insights into Admiralty organisations or activities.

(10) Votes A: Maximum Permissible Strengths of the Armed Forces:

HC Annual from 1971

Previously included in item (3): Covers Regular and Reserve Forces by branch of service/type of reserve and gives basic Officer - Other Rank split.



B. OTHER DOCUMENTARY SOURCES

- (11) Annual Report of the Inspector General of Recruiting, (Army and Militia)  
Cmd. Annual to 1904. Thereafter incorporated in (4)  
Contents are similar to those of the 'Recruitment' sections of pre WW1  
'General Annual Reports on the Army' (4) but statistical sections are  
less detailed and often not comparable.
- (12) Civil Service Statistics  
Annual from 1970 Published by HMSO  
Civilian Employment in Government Departments. Volumes vary in degree  
of detail given but all have some material on Defence Civilian Employees.
- (13) Estimates/Supply Estimates: Memorandum (by the Chief Secretary to the  
Treasury:  
Cmd. Annual: Post WW2  
Useful summary source of all Government Departments' Estimated Expenditures  
each year, analysing Public Expenditure by programme with ten year summary  
tables (most years) and some limited details of certain types of Civilian  
Employees of the various departments and of the relationship of current  
public expenditure with past and planned future expenditure. Provides  
very useful ten year summary series of the Defence Budget and the Air,  
Army, Navy and Central Department budgets by main Vote headings.
- (14) Estimates Committee: (Sub Committees' Reports)  
HC Papers. (To Session 1969-1970, Thereafter See (15))  
Forerunner of the Expenditure Committee: Reports on Defence matters tend  
to be short of hard facts and illuminating statistics but often contain  
useful explanatory material on a wide variety of Defence topics. HC  
53/300 of session 1969-1970 is a major report on 'Recruitment for the  
Armed Forces' and contains some statistical material on Recruitment-Numbers,  
Expenditures and Activities.  
See also (15)
- (15) Expenditure Committee Reports: Defence and External Affairs Sub- Committee  
HC (Intermittent Publications from 1970-1971).  
In recent years various reports from this Sub-Committee have embodied  
material on a wide variety of defence topics. For the purposes of general  
statistical compilation HC 141 (1971-1972) and HC 259 (1974-1975) are  
particularly informative.  
See also (14)
- (16) Naval Expenditure (Principal Naval Powers):  
HC Intermittent Series: Last number HC 410, (1913-1914)  
Expenditure, adjusted to be comparable, of Austria - Hungary, Germany, France,  
Italy, Japan, Russia, UK and USA. Also Manpower. Ten year runs.
- (17) Report of the Advisory Committee on Recruiting (The Grigg Report)  
Cmd. 545 October 1958  
Examination of "the factors bearing on the willingness of men and women  
to serve in the Armed Forces", and recommendations. Statistical content  
is limited.
- (18) "Return showing the total numbers of Officers and Men in the Land Forces  
of Great Britain and Ireland, France, Austria, Russia and Germany  
(including Prussia) respectively in each of the years 1792, 1800, 1805,  
1815, 1840, 1854, 1870, 1880, 1900 and 1906".  
HC 67 (1908) (In Parliamentary Papers (1908) Vol LXIV p. 955).

- (19) Review Body on Armed Forces Pay: Reports  
Cmd. (From 1971)  
Reviews of the pay and allowances of members of the Armed Forces, with recommendations as to changes in pay and allowances and alterations in pay and allowance structures. These reports typically embody extensive details of Armed Forces pay scales. Useful as a guide to the complexities of Service pay and allowances.
- (20) Standing Reference on the Pay of the Armed Forces (National Board for Prices and Incomes)  
Cmd. (1966-1970) Thereafter see (19)  
Contents and remit similar to those of item (19).
- (21) Statement showing the Staffs of Government Departments  
Cmd. Pre-WW2 Only  
Annual, quarterly or monthly tables showing Non-Industrial Staff only employed by the Various Departments - including War Office, Admiralty and Air Department.
- (22) Strengths and Casualties of the Armed Forces and Auxiliary Services of the United Kingdom 1939 to 1945  
Cmd. 6832 June 1946  
Strengths of Armed Forces (Males), Womens Auxiliary Services (i.e. WRNS etc. and Nurses), Civil Defence Forces, Home Guard and Observer Corps each year 1939-1945: Casualties (Killed, Missing, Wounded, Prisoners of War and Internees) of the Various Armed Services etc. in the war against Germany and against Japan: Civilian Casualties: Miscellaneous (limited) Geographical Location data.
- (23) Synopsis of the British Air Effort During the War (WWI)  
Cmd. 100 April 1919  
Traces the Activities of the antecedents of the RAF through the war. Some statistical material (Strengths, Aircraft and so on).
- \* \* \* \* \*
- (24) Army Medical Department Reports  
Cmd Annual to 1914  
(Mainly data on diseases of all sorts in the Army analysed by geographical location of the Troops, but also contains some data on recruits ages, measurements, education and countries of origin. After 1904 most such data is reproduced in the General Annual Report on the Army: Item (4)).
- (25) "Comparative Tables showing the Weekly Rates of War Pensions and Allowances granted by the Principal Allied and Associated Powers and Dominion Governments and by Germany to men disabled, and to the dependants of men deceased, in consequence of the Great War".  
Cmd. 474 November 1919.
- (26) Statistical Report of the Health of the Navy  
HC Annual Paper to 1914.

C. GENERAL STATISTICAL COMPILATIONS OR ABSTRACTS

- (27) Annual Abstract of Statistics  
CSO Annual from Number 84 (1948). Published by HMSO  
See (39) for Earlier numbers in this series.  
Summarises all the main statistical series produced by the UK Government in one document. Most tables are printed as ten year abstracts.  
Contents cover: Area and Climate, Population (including Age and Sex tables), Social conditions, Education, Labour (including Sex, total Workforce, Armed Forces, Civil Service Staff and Earnings data), Production, Transport and Communications, Retail Trade, External Trade, Balance of Payments, National Income and Expenditure, National Finance, Banking etc. Prices.  
More extensive data on individual topics can usually be found in the sources from which the Annual Abstract tables are compiled. (An 'Index of Sources of Statistical Material' is appended to each volume of the Abstract).  
See also (39)
- (28) British Labour Statistics Yearbook  
Department of Employment Annual from 1969. Published by HMSO  
Coverage is similar to that of (29) Most Tables are presented as ten year abstracts  
See also (29)
- (29) British Labour Statistics: Historical Abstract 1886-1968  
Department of Employment Published by HMSO 1971.  
Historical Abstract compiled largely from back numbers of monthly and quarterly Labour Statistics, HMSO publications, and Annual Reports on Labour Statistics presented to Parliament (to 1937). A more comprehensive source for Employment and Earnings Statistics than (27) or (33/34).  
Contents cover: Wage Rates and Normal Hours, Earnings and Hours Actually Worked, Retail Prices, Employment (Including Occupied/Active Population by Age and Sex and by Occupation), Unemployment, Household and Family Expenditure, Trade Union Membership, Industrial Disputes, Industrial Accidents, Shift Working, Labour Costs, Output, Census of Production Statistics.  
See also (28)
- (30) Census of Population Published by HMSO  
General Register Office: Decennial 1851-1971 and 1966 (Not 1941). N.Ireland 1926, 1951, 1961, 1966, 1971. No Irish Census 1921.  
Main geographical compilation of Labour Statistics, Population by Sex Age and Occupation by small areas (towns, counties, regions). Also miscellaneous other data on living conditions. Coverage and definitions of terms vary from Census to Census.  
Census Publications tend to be voluminous and extremely detailed. For these reasons the non-specialist may find Summary Abstracts based on Census Data more useful, (e.g. the relevant sections of (27) or (29)).
- (31) FEINSTEIN C.H. National Income Expenditure and Output of the United Kingdom 1855-1965. (Studies in the National Income and Expenditure of the United Kingdom). National Institute for Economic and Social Research and Cambridge Department of Applied Economics series.  
Published by Cambridge University Press 1972.  
An Historical Abstract with copious notes on methods of estimation and quality and sources of the material.  
Contents Cover: Personal Income and Expenditure, Corporate Accounts, Central Government and Local Authorities Income and Expenditure, International Transactions, Trading Profit, Rent, Capital Formation, Real Product, Population and Labour Force.  
Contains an extensive bibliography of sources of material.



- (32) Finance Accounts of the United Kingdom  
HC Annual to 1968  
Actual Expenditures by Defence Departments, on a National Accounts Basis.  
See also (1), (13)
- (33) MITCHELL B.R. and DEANE P. Abstract of British Historical Statistics (to 1938). For Period since 1938 see (34)  
Published by Cambridge University Press 1962. (Also available as University of Cambridge, Department of Applied Economics, Monograph 17)  
A General Historical Abstract with broadly the same scope as the Annual Abstract (item 26) but running tables well back into the 19th century or even earlier. Brief notes accompany each section of the book, noting the quality and coverage of the tables.  
Contents cover: Population and Vital Statistics, Labour Force, Agriculture, Coal, Iron and Steel, Tin, Copper and Lead, Textiles, Transport, Building, Miscellaneous Production Statistics, Overseas Trade, Wages and Standard of Living, National Income and Expenditure, Public Finance, Banking and Insurance, Prices.  
Contains a bibliography  
See also (34)
- (34) MITCHELL B. R. and JONES H. G. Second Abstract of British Historical Statistics (From 1938 to c. 1966) (For Earlier Period see (33)).  
Published by Cambridge University Press 1971. (Also available as University of Cambridge, Department of Applied Economics, Monograph 18).  
Form and contents as (33). No Bibliography.  
See also (33)
- (35) Monthly Digest of Statistics  
CSO Monthly from 1945 Published by HMSO  
Contents similar to those of the Annual Abstract (27)  
For contemporary Population, Workforce and Expenditure data.
- (36) National Income and Expenditure of the United Kingdom  
Cmd. 1946 to 1951. Thereafter continued as item (37)  
For contents see (37)
- (37) National Income and Expenditure (The 'Blue Book')  
CSO Annual from 1952. Published by HMSO  
Abstract of Income and Expenditure Statistics. All tables have runs of previous years included and from the 1974 issue the lay-out was improved somewhat to allow easy presentation of ten year tables (in some cases more).  
Contents cover: Summary Tables, National Expenditure and Output at Constant Prices; Industrial Input and Output; Social accounts - The Personal Sector, Companies, Public Corporations, Central Government, Local Authorities, Combined Public Authorities, Public Sector, Capital Formation, Financial Accounts, Treasury Analysis of Public Expenditure.  
See also (36)
- (38) The Registrar Generals' Statistical Review of England and Wales and of Scotland.  
(Parts II, Tables, Population).  
General Register Office Annual Published by HMSO  
Annual (as distinct from Decennial Census) estimates of population by geographical location, sex and age. For the non-specialist the population tables in the Annual Abstract (27) or in the Annual Abstract of Regional Statistics (not cited here: HMSO publication) are probably adequate, and easier to work with.

- (39) Statistical Abstract for the United Kingdom  
HC Annual to Number 83 (Cmd. 6232) 1940 Forerunner of (27)  
For contents see (27)
- (40) Statistical Digest of the Second World War (In the Official Civil Series of the History of the Second World War).  
Produced by the Central Statistical Office.  
Published by HMSO and Longmans, Green and Co. London 1951.  
Statistical material on a yearly, quarterly or (in some cases) monthly basis for the years 1939-1945 covering: Population and Vital Statistics, Manpower (Armed Forces and Civilians), Social Conditions, Agriculture and Food, Fuel and Power, Raw Materials, Production, External Trade, Transport, Public Finance, National Income, Wages and Prices.  
Many tables contain separate analyses of resources devoted to military uses.  
See also (47).
- (40a) Statistics of the Military Effort of the British Empire During the Great War 1914-1920  
Produced by the War Office  
Published by HMSO 1922.  
Army (and RAF) statistics and notes on most aspects of Military Organisation and Activity both of the type covered in the Annual General Reports on the Army (4) (except Ages, Education, Nationality and Religion) and of those more specifically war-related (battles, campaigns and so on). Also some details of Allied Forces participation in the war and occasional tables on Enemy Forces.  
  
The compilation is extremely detailed but of limited value for comparison with pre-war and post-war circumstances because most tables cover only the 1916-1920 period (the monthly Abstracts of Military Statistics on which the compilation is based were first issued in 1916) and their form and contents are not compatible with other data sources (e.g. (4)). However the compilation does assemble numerous notes on the origins and growth of organisations and units (RAF, Nurses and Womens Services, Tank Corps, munitions, Supply and so on) which are of value and interest.

D. OTHER REFERENCES (Open Literature)

- (41) ALLEN R. G. D. "Mutual Aid between the US and the British Empire 1941-1945"  
Journal of the Royal Statistical Society Vol. CIX Part III, 1946  
Account of the nature, extent and Value of Mutual Aid (notably US Lend-Lease aid to the UK and UK Reciprocal Aid) with some interesting comparative data of the war involvement of the US, UK and, occasionally, some British Empire countries.  
This article is reproduced as Appendix (3) in (46) below.
- (42) FARRAR-HOCKLEY Major-General A. H. 'National Service and British Society' MIMEO  
Defence Fellowship Study, Exeter College, Oxford 1968-1970  
Useful short history of attitudes towards, and actions in connection with, recruitment into the Armed Forces, and in particular Conscription, during the 20th Century (and, more briefly, during the preceding twelve centuries). Also some examination of the social consequences of conscription for the conscript and for Society.
- (43) INMAN P. Labour in the Munitions Industries (in the Official Civil Series of the History of the Second World War)  
Published by HMSO and Longmans Green and Co. London 1957.  
An Account of Manpower Affairs in the various industries controlled by the Supply Ministries during the War.  
A companion volume to (44).
- (44) PARKER H. M. D. 'Manpower' (in the Official Civil Series of the History of the Second World War).  
Published by HMSO and Longmans Green and Co. London 1957  
Extensive Account of the mobilisation of the Civilian population of the UK, of the ways and means in which Labour was allocated between the Armed Forces, Civil Defence and Industry and of the factors which determined decisions of policy.  
See also (43) which is a companion Volume.
- (45) O'BRIEN T. H. Civil Defence (in the Official Civil Series of the Second World War)  
Published by HMSO and Longmans, Green and Co. London 1955
- (46) SAYERS R. S. Financial Policy 1939-1945 (in the Official Civil Series of the Second World War)  
Published by HMSO and Longmans, Green and Co. London 1956  
Account of the policies evolved between 1939 and 1945 to meet the financial problems presented by the need to finance the War.  
Appendix 3 reproduces Allen's article (see (41) above).
- \* \* \* \* \*
- (47) History of the Second World War: UK Civil Series (Edited by Hancock K.)  
Published by HMSO and Longmans, Green and Co. London (Various Years from 1950).  
28 Volumes covering all the main facets of UK Civil Affairs during the war.  
Several Volumes are individually referenced above: See (40) (43) - (46).



E. OTHER REFERENCES (Official: Limited Availability)

- (48) Army Manpower Statistics  
Ministry of Defence (First Issued 1951).  
Currently half-yearly, but was quarterly at one time. Post-WW2 production. Army Manpower Statistics (AMS) is the post-WW2 equivalent of the General Annual Report on the Army, see (4). Although the layout, definitions and scope differ, in essence all the main series of the General Annual Report are continued in AMS. Most tables in AMS have back runs of at least 3 and often 8 - 10 years.  
Contents cover: Strengths by type of engagement, geographical location, Arm/Corps and Ranks, Age, Age and Rank, length of Service (Males Only in some cases). Proportions of Personnel Married, Employment or Trades of personnel. Recruitment: totals, by age, by length of engagement, by educational attainment, by Arm/Corps, by type of engagement. Inflow Outflow and Wastage. Reserves: totals, by type, by Ranks, by Arms Corps, by Age. Cadet Force Strength, Wives and Children of Army Personnel Overseas, State of Family Union, Married Quarters (numbers), Retired Officers in Army Department.  
See also (4) for pre-WW2 statistics on the Army.

\* \* \* \* \*

- (49) Armed Forces Accommodation and Family Education Survey 1973  
Ministry of Defence: Defence Statistics  
Up-date of item (52). See (52) for details of contents.
- (50) Report of the Officers Resettlement Survey 1968, 1970 (Second Survey)  
Ministry of Defence: Defence Statistics  
The 1970 Report was on a Survey of 5500 Officers (all Services and Ranks) who had left the Service in the previous two years to obtain information on:
- (a) Employment needs, prospects, search procedures, methods of obtaining employment, type of initial employment, salary, job satisfaction, change of employment, length of search time, unemployment rates of officers leaving the Service, whether voluntarily or perforce at the end of an engagement.
  - (b) Officers desired and actual geographical locations; and attitudes towards house purchase and other forms of accommodation.
  - (c) Officers Qualifications on Retirement; Civilian qualifications obtained in and out of the Services, Service Qualifications obtained.
  - (d) Officers Resettlement Advice: numbers seeking advice, method of receiving advice, when received, value of advice, attendance at resettlement courses.
  - (e) Officers Pre-Release Resettlement Training: numbers receiving and reactions, reasons for non-participation.
  - (f) Officers views on further help in Resettlement: Numbers desiring more extensive training, type of training desired, impeded by a lack of further training, full-time study undertaken after leaving the Services.
- The 1968 Report surveyed returns by c. 5800 Officers who had left the Services during the previous 3 years.  
See also (51)

- (51) Report of the Other Ranks Resettlement Survey 1969, 1972 (Second Survey)  
Ministry of Defence, Defence Statistics  
The 1969 Report (produced 1970) surveyed c. 5000 returns of Servicemen (all three Services) who had left the Services during July 1968 and June 1969. Contents similar to those of the Officers Resettlement Surveys. See (50) for details.  
The 1972 up-date reports on c. 2000 returns covering broadly the same topics but in much less detail.  
See also (50)
- (52) Report on the Family Size and Married Quarters Survey 1970  
Ministry of Defence, Defence Statistics.  
Item (49) is an up-date of this 1970 Survey.  
Report on a 1970 Survey of 9000 returns from male married personnel, all ranks from Captain/Brigadier/Air Commodore downwards designed to obtain information on:
- (a) Proportions married by Rank, Type of Service and geographical Location of Service and type of accommodation occupied by personnel and their families by rank by Service.
  - (b) Family size by Service and by Rank, Area of Service, Age of Father and by Sex of children.
  - (c) Education of Dependent Children: Type of School attended compared with educational status, rank, type of service and geographical area of service of Fathers.
  - (d) Housing I: Numbers not living in married quarters by Rank, Type of Service, Geographical Area of Service, Age, Family Size. Reasons for not wanting Married Quarters and types of public accommodation preferred by rank.
  - (e) Housing II: Home ownership and House Purchase: Numbers with own houses, means of acquiring houses, reasons for acquiring - or not acquiring - own homes.
- The 1973 Report (item (49)) covers broadly the same ground based on a survey of c. 10,000 returns.  
See also (49).
- (53) Social Research Advisory Panel (Ministry of Defence) Register of Research Projects Undertaken or Sponsored by the Ministry of Defence  
Ministry of Defence  
Irregular (first issue May 1971)  
Lists, and gives cryptic summary of conclusions of, studies in the social field covering: personal attitudes and motivation; personal characteristics; functioning of the Servicemen within the organisation; the interaction between the Services and Society.

**Economic and Social Costs of the All-Volunteer Army**

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## INTRODUCTION

As nation-states in Western industrialized society increasingly re-appraise the utility of implementing their defence policies through the maintenance of traditionally recruited mass armies, a consistent issue of fundamental concern is the consequence of any change in the force structure. This is a wide ranging and far reaching question. It involves the consideration not only of the strategic and tactical implications of any adopted change, but also of the political, social and economic effects of innovation. To suggest, therefore, that changes in the complex processes of national defence policy can be evaluated simply in terms of some of the social and economic consequences of the transition to an all-volunteer armed force, is to postulate at best, a crude tool for analysis. Yet in all advanced industrialized democracies, the basic issue of determining the reality of the more important facets of these two consequences is not one that can be lightly dismissed. The complexity of the question is cogently summarized in the 1972 Report of the Force Structure Commission in West Germany (1). The Report recognizes the rationality of arguments based solely on an evaluation of the economic costs :

From the economic point of view a volunteer force is the optimum solution. The individual is employed in a function which gives him personal satisfaction and in which he is, therefore most useful to the economy.

Yet in examining more critically the possibility of adopting an all-volunteer force in preference to a volunteer-intensive concept force, the Report reaches the conclusion that contemporary social conditions in the Federal Republic of Germany in 1972 made it highly unlikely that the required numbers could be recruited. It was, however, not only conditions in the parent society which imposed constraints on policy making decisions. As the Report stresses :

Even if enough volunteers could be recruited, there would not be enough money to pay them, for the pay of volunteers would have to be the same as that of other personnel in the public service. Both these reasons preclude the adoption of an all-volunteer force structure in the foreseeable future.

In contrast, both the United Kingdom and the United States opted for the cessation of conscription; the former after the 1957 White Paper presented by the then Defence Minister, Duncan Sandys (2); the latter after the 1970 Report of the President's Commission on an All-Volunteer Force (3). From this it can be inferred that the stance adopted by the West German Commission in 1972 reflected an overcautious appraisal of the economic and social consequences of change in the force structure. Yet a consideration of the experience of these two countries following the phasing out of conscription does suggest that the fundamental transformation of military organisation associated with the move to an all-volunteer force inexorably leads to the consequences envisaged in the

## West German Report.

This conclusion appears to be very clearly confirmed when the British experience is examined in more detail. Conscription was finally abandoned in 1962 since when the economic and social consequences of the taken decision have been most marked. It has been a period characterized by a constant readjustment of recruiting targets and force ceilings, a readjustment which coincided with a consistent reappraisal of the role of British armed forces in a phase of Imperial withdrawal. The hard choice of allocation within the limits of constrained resources was initially facilitated by a decline in power status and the loss of global responsibilities, but it has been subsequently made more difficult by an increasing commitment to aid the civil power in Ulster and by a worsening economic situation. In this context, therefore, the consequences of the 1957 decision have a particular poignancy, and although cross-cultural comparisons have to be made with care, the British experience can be used as the basis for the further examination of the consequences for other democratic industrialized societies of the decline of the mass armed force. The purpose of this paper is thus to examine firstly the economic effects of the return to an all-volunteer force structure. This includes an evaluation of the thesis that a scheme of economic reward linked to that obtainable in civilian employment produces the desired number and quality of military personnel. Second, it seeks to explore the social consequences of changes in military organization by



considering further the argument that 'the military is facing a professional dilemma which cannot be solved by economic incentives alone' (4). Finally it seeks to identify changes in civil-military relationships and to explore the consequences of all-volunteer armed forces for British society in general.

The central theme of this analysis is that these economic and social consequences are interrelated although each element for the purpose of analysis can be considered as a separate factor. It is argued that the combined effect of these consequences is such as to suggest that in an advanced industrialized society, a nation which is committed to the redistributive goals of the modern welfare state cannot afford an all-volunteer military system. In this context the notion of 'cannot afford' invites an emotive reaction. For supporters of a comprehensive British defence policy, economic and, indeed, social costs have to be subordinated in their importance as determinants of resource allocation to the criteria of defence needs. The latter, in turn, are defined in terms of the military capability of a potential aggressor with the result that any increase in this capability produces a demand for increased defence expenditure that 'has to be afforded'. In complete contrast, at the other end of a continuum of reaction, opponents of the current level of defence expenditure and of the size of the military establishment stress that this inhibits the redistribution of national economic resources and the development of certain critical minimum standards

in welfare areas. Consequently, it is argued that the economic and social costs of maintaining an all-volunteer army cannot be tolerated and that there must be an acceleration of the trend towards establishing clear national priorities for welfare over defence values.

#### The Economic Costs

An initial starting point for examining more closely the validity of these reactions is to consider changes in the proportion of the Gross National Product which is devoted to defence. In this respect, available data has to be treated with caution for there are innumerable problems in reconciling variations among different data sources. Certain trends, however, can be noted, and these are shown in Table 1.

Table 1

Defence Expenditure of NATO Countries, 1964-1973.  
As a percentage of GNP at factor cost, based on current prices.

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Belgium	3.8	3.5	3.5	3.5	3.5	3.3	3.3	3.2	3.2	3.1
Canada	4.2	3.5	3.3	3.4	3.1	2.8	2.8	2.7	2.5	2.3
Denmark	3.2	3.2	3.1	3.1	3.3	2.9	2.8	2.9	2.8	2.5
France	6.3	6.1	5.9	5.9	5.5	5.0	4.6	4.4	4.2	4.2
Federal Republic Germany	5.9	5.5	5.3	5.6	4.7	4.7	4.3	4.5	4.8	4.7
Greece	4.1	4.0	4.2	5.1	5.6	5.8	5.8	5.6	5.3	4.8
Italy	3.7	3.7	3.8	3.5	3.3	3.0	3.0	3.3	3.5	3.4
Luxembourg	1.6	1.5	1.5	1.3	1.0	1.0	0.9	0.9	1.0	1.0
Netherlands	4.7	4.3	4.1	4.3	4.0	3.9	3.8	3.8	3.8	3.7
Norway	3.9	4.2	4.0	3.9	4.0	4.0	4.0	3.9	3.7	3.7
Portugal	7.3	6.8	6.9	8.0	8.2	7.6	7.9	8.3	8.4	7.5
Turkey	5.6	5.8	5.4	5.5	5.2	5.2	5.2	5.4	5.0	4.5
United Kingdom	6.8	6.6	6.5	6.5	6.3	5.8	5.7	5.8	6.2	5.6
United States	8.8	8.2	9.1	10.2	10.1	9.5	8.7	7.8	7.3	6.8

Source : NATO document ISM (73) 7, dated July 16, 1973.



From this data, it can be seen that following the phasing out of conscription, the proportion of the Gross National Product allocated to defence expenditure in the United Kingdom has with the exception of 1972, declined consistently. This reflects the specific political decision to reduce a defence commitment which in the 1950s generated an expenditure averaging 10% of the gross national product and which involved 7% of the working population either in the armed services or in supporting functions (5). It has to be noted, however, that a similar move characterizes the defence expenditure of most of the member countries of NATO, other than Greece, Portugal and the United States. This suggests that we are witnessing a common trend in all western industrialized societies towards the re-allocation of economic resources that were formerly assigned to defence expenditure, and that this trend is most noticeable in those countries where the GNP has increased during the decade under consideration. In Great Britain where this growth rate has been less marked, it is, however, significant that it was found impossible to bring the proportion of the GNP spent on defence into line with the Western European average of 4.4% (1973). This contrasts very markedly with the allocation of resources to the maintenance of an all-volunteer force in the pre-conscription period when before 1914 some 3% of the GNP was allocated to defence expenditure or when in the 1920s and 1930s this percentage varied from a high of 4.54% in 1922 to a low of 2.7% in 1927. Even in the armament expansion period of 1937 to 1939 only 3.78% of the GNP was allocated to

defence expenditure in the earlier year, 3.83% in 1938 and 4.7% in 1939. It is thus noteworthy that to maintain an all-volunteer force in being under current conditions, the United Kingdom is obliged to spend a disproportionately high percentage of the GNP on defence, a proportion that is greater than the European average and is in excess of that spent on the all-volunteer force in the past.

In examining this trend further, it can be argued that this is largely attributable to the higher costs of supporting the all-volunteer force. This suggestion is echoed in the Report of the West German Force Structure Commission where it was projected that about 6.2% of the 1973 GNP would have had to be spent on a professional Bundeswehr in comparison with the 4.7% spent on a conscript army with a volunteer content of just under 53% (6). Whilst this projection seemingly supports the contention that "the luxury of a volunteer force may be beyond the fiscal means of a social welfare state" (7) a distinction has to be drawn between the economic and budgetary implications of this initial conclusion. The economic consequences of utilising conscription as a means of raising military manpower have been examined in a number of studies (8). The generally reached conclusion is that conscription is a tax which is exacted and paid in unremunerated labour (9). If correct labour prices were charged and military operations moved to a more capital intensive mix, then the same level of military output, it is argued, could be achieved with the civil sector actually

increasing output by using the labour released from the military sector (10). Cockle summarizes the point (11) :

"The cost to society of conscription is this foregone output. Artificially low wages results in an inefficient allocation of resources between military and civil communities and far from being cheap is quite expensive".

Implicit in this argument, however, are certain assumptions about economic rationality which do not appear to have been an acceptable determinant of British manpower planning after 1957. In the first place, the shift to a capital intensive system -which in the 1957 White Paper was planned to be a concomitant of the abolition of conscription, has not been implemented to the extent that was envisaged. There are many reasons for this. In part the failure was a reflection of the determination to reduce overall defence expenditure even though the result was that the budget was not large enough to permit a high level of capital investment. This was exacerbated by a period of excessive inflation and also by the disproportionate increase in that part of the defence budget allocated to personnel costs. Secondly, many facets of the role of Britain's armed forces still demanded a labour intensive manpower system. Correlli Barnett succinctly summarizes some of the reasons for this in a review of British strategy after 1957 (12).

Britain was left therefore with an imperial army in a European role. Yet British history and recent history in particular,



made plain that Britain needed for this role not a small, all-regular force, but a large field army formed by the mobilizable trained manpower of the nation.

To these reasons can be added the effects of having to utilize troops in aid of the civil power, a task which equally demands the employment of large bodies of men rather than the use of sophisticated labour-saving equipment. Thirdly, the rational operation of a price and wage mechanism has been, and is, constrained by bureaucratic rules which are based on the principles of parity of income for equivalent rank levels within the military organization and the provision of a career structure. Consequently, increases in service pay which were introduced in 1968 due to 'evidence of a serious manpower shortage in the services and failure to meet - - recruiting targets' (13) and which were again implemented in 1969 to overcome the existing serious manpower shortage (14), had a universal applicability which increased total personnel costs. The alternative of simply increasing pay to attract and retain personnel in areas of specific shortage, that is, to adopt a differential system of reward based on the rationality of supply and demand, was unacceptable even though the adopted solution was an inevitable cause of increased costs. As a result, the move away from conscription to an all-volunteer force has been consistently associated with the spending of a disproportionate percentage of GNP on defence, for the savings which were envisaged in theory by

the maximization of available resources have not materialized in practice.

The overall result of these constraints on the exercise of economic rationality is that manpower planning has continued to be determined by budgetary and not economic cost consideration. This is very understandable. The exercise of economic rationality in manpower planning is affected by a large number of constraints. An awareness of the social costs of postulated changes in the force structure is, for example, one factor which may inhibit the exercise of a rational preference. To this may be added the constraining effects of the wish to perpetuate traditional aspects of the military culture, the reluctance to abandon completely traditional military roles, the insistence on high standards of performance which may not be justified in terms of pure economic costs, and so on. Most importantly, economic rationality has to be subordinated to the exercise of political preferences. As Greenwood has pointed out (15).

Species of budgetary 'constraints' have been instrumental in bringing about the reshaping of the defence effort in the post-war period. But they have not been 'decisive' - in a strict, imperative sense. For budgetary constraints are not some deus ex machina. They are produced by 'the machine' itself, the bureaucratic process, as expressions of central public choice.

Consequently, attempts to limit the proportion of the GNP spent on defence have in this field resulted in repeated reductions to the proposed size of the all-volunteer force and to a revision of the envisaged role of the military in the post-conscription period.

Yet it can still be concluded that within the finite resources of the modern democratic state, the maintenance of the all-volunteer force imposes an unacceptable burden on national resources even after these amendments to the size and role of the force. For the United Kingdom it can be argued that the share of the GNP which can be allocated to defence spending cannot exceed the 1976 NATO average of 3.9%. This would mean a reduction from the present level of 4.9%. The available options for cutting expenditure, however, are relatively limited. The initial constraint has been clearly spelt out by Geraghty (16).

The fallacy in deriving defence requirements from GNP calculations is, of course, that while our GNP is less than most others in NATO, our defence needs are not. Arguably, they are greater.

A second limiting factor is that even if force levels can be marginally reduced, a reduction in the share of GNP allocated to defence is not inevitable. This conclusion is evidenced by the British experience during the last decade. *Personnel costs* within the allocated budget have consistently



continued to rise even though the size of the force has diminished. Thus total personnel costs have increased from 39.4% of the defence budget in 1966-67 to 46.2% in 1975-76, although force levels dropped from 417,400 in the earlier year to an estimated 333,900 on April 1, 1976. (17). The trends which have taken place during this period are shown in Table 2. Again, the presented data has to be treated with caution and it is possible that the specified percentage of the budget ascribed to personnel costs is an under-estimate of the true position. Fabyanic discusses this further in reviewing current British personnel costs, for since official figures do not include personnel-related costs such as personnel movements, clothing and certain food costs, he estimates that a further 10% to 12% can be added to the government's figures (18). It also has to be noted that the personnel costs given in Table 2 relate to active duty personnel only; that is, they exclude the cost of pensions, even though these are a significant item of expenditure in an all-volunteer force.

Table 2

<u>Expenditure on Military Personnel in the United Kingdom. 1966-1975.</u>				
<u>Year</u>	<u>Defence Expenditure</u> <u>(£000's)</u>	<u>Personnel Costs</u> <u>£000's)</u>	<u>%</u> <u>(PC/DE)</u>	<u>Total</u> <u>Strength (000's)</u>
1966	2172.11	821.75	37.83	419.4
1967	2205.12	867.33	39.31	417.4
1968	2271.19	939.59	41.36	401.8
1969	2265.85	960.33	42.38	383.0
1970	2279.98	1,041.52	45.68	373.0
1971	2343.06	1,228.93	52.44	368.0
1972	2455.72	1,271.20	51.76	371.4
1973	2838.90	1,413.00	40.60	367.0
1974	3469.43	1,492.88	43.02	349.3
1975	4314.60	1,868.70	43.31	340.1

Source : Statements on Defence Estimates 1966-75 and Supply Estimates, Ministry of Defence.

From this table it can be seen that there is a clear trend towards personnel costs absorbing an increasing share of the total defence budget. A question for further discussion, however, is the extent to which this trend is repeated in those nation-states which continue to rely on conscription as a means of manpower recruitment. In West Germany, official figures suggest that the percentage of the defence budget spent on personnel costs, excluding the cost of pensions, was 44% in 1975 and 42.5% in 1976. This, however, is not based on total defence expenditure. Thus in 1975 when the latter totalled DM 47.6 thousand million, DM 13.7 thousand million were attributed to expenditure on personnel, that is 28.78%. By way of comparison, DM 10.5 thousand million or 22.1% of total defence expenditure was allocated to the costs of the Parliamentary Commission for the Armed Forces, NATO civil budget, military aid, expenditure on behalf of allied forces stationed in Germany and expenditure on Berlin (19). In a comparative study of the situation in France and the United Kingdom, Kelleher et al have shown that the percentage of expenditure on personnel in France has from 1966-1975 fluctuated between a low of 33.72% in 1968 and a high of 38.64% in 1971 (19). The trend here is towards a mean of 36% which is a proportion considerably lower than that spent in the United Kingdom. The suggestion that the higher cost is a reflection of reliance on a volunteer-force is confirmed by the American situation where it has been estimated that at least 52% of the current defence budget is absorbed by these personnel costs.



A closer look at the data relating to expenditure on personnel costs within the United Kingdom confirms that the real level of expenditure for defence has not declined but has in fact increased (20). What has declined, as Kelleher et al have stressed, is the relative share of the GNP and, indeed, of central government expenditure devoted to defence. In Table 3 which is based on original calculations by Kelleher and her colleagues, expenditure on personnel is shown in constant (1970) US Dollars, as is the cost per head of defence manpower. By way of comparison, the constant cost per head of defence manpower in France is shown as a percentage of the British figures.

The Table shows clearly the contrast in trends in the respective cases of an all-volunteer force and a conscript army. For the former, it is clear that while manpower strengths have declined, the real level of expenditure for personnel costs has increased dramatically. Thus while the overall size of the armed forces has declined from 419,400, a figure already well below the peak conscription size of 879,400 in 1952, to 340,100, expenditure on personnel, expressed in constant dollars, against a basic year of 1970 (100), has risen from 94.26 to 129.45. The magnitude of this increase is more clearly seen when the expenditure is considered in terms of the cost per head, for as Table 3 shows this has steadily risen throughout the period from 224.74 to 380.62. In

**Table 3** Expenditure on Personnel, Manpower strengths, and Cost per Head of Defence Manpower : 1966-1975.

<u>Base Year 1970 = 100</u>		<u>Expenditure in constant (1970) US Dollars</u>			
<u>United Kingdom</u>		<u>France</u>			
<u>Year</u>	<u>Expenditure on Personnel</u>	<u>Defence Manpower N (000s)</u>	<u>Costs per Head</u>	<u>Defence Manpower N (000s)</u>	<u>Cost per Head as a % of U.K. costs</u>
1966	94.26	419.4	224.74	560	74.10
1967	96.83	417.4	231.98	560	73.36
1968	100.68	401.8	250.57	565	65.18
1969	97.67	383.0	255.01	563	70.00
1970	100.00	373.0	268.09	566	65.89
1971	113.13	368.0	307.41	566	60.21
1972	113.32	371.4	305.11	559	64.17
1973	118.59	367.0	323.13	574	61.19
1974	112.86	349.3	323.10	573	55.51
1975	129.45	340.1	380.62	579	51.88

Sources :

1. Exchange rate figure and common price under figures for the 1970 base are obtained from IMF International Financial Statistics (December, 1974 and August 1976).
2. U. K. manpower strength is obtained from Statement on the Defence Estimates.
3. Manpower strength for France is obtained from The Military Balance, 1966-75 (London IISS). The figures include the strength of the Gendarmerie.

contrast, the French have been able to maintain in being a force of relatively constant size for which personnel costs have remained at a more stable figure. Because these total costs have fluctuated between 93.27 and 114.35 (1970 as the base year of 100) while the force has remained constant in size, costs per head expressed in constant US dollars have only risen from 166.55 to 197.49 over the decade. As a percentage of the United Kingdom costs per head, as Table 3 illustrates, the French costs have declined to a point where they are one half of the British costs.

The further significance for the all-volunteer force of these trends in the United Kingdom can be illustrated by considering the relationship of upward and downward movements in the three areas of expenditure on personnel, manpower strength and expenditure per head. If 1970 is taken as a base year for both expenditure and manpower, the relationship is as given in Table 4.



Table 4

Relationship between Manpower strength and Personnel Costs :  
United Kingdom : 1966-75.

Base Year 1970 = 100			
Year	Expenditure on Personnel	Manpower Strength	Expenditure in constant US dollars Cost per head
1966	94.26	112.44	83.82
1967	96.83	111.90	86.53
1968	100.68	107.71	93.46
1969	97.67	102.68	95.12
1970	100.00	100.00	100.00
1971	113.13	98.66	114.66
1972	113.32	99.57	113.80
1973	118.59	98.39	120.53
1974	112.86	93.64	120.51
1975	129.45	91.18	141.97

Real costs per head have increased very significantly since the base year of 1970 and although a certain degree of stability has been achieved from time to time, as for example in 1973 and 1974, increases in pay have had a noticeable effect on manpower costs. It is significant that while manpower strength since 1970 has declined by some 9%, expenditure on personnel has increased by 29% in real terms. One interesting question which arises is whether the continuation of this trend produces by 1980 a situation where, all other things being equal, manpower declines to a total strength of 300,000, that is, to a level some 20% below the 1970 figure, while expenditure on personnel rises to a level that is at least 60 - 70% greater than in 1970. If this were to happen, costs per head would at constant prices be more than double those of 1970. Even if this situation were not to arise, the current trends affecting the all-volunteer force in the United Kingdom can be seen to contrast very sharply with French experience. In France, the manpower strength has shown much less variation, so that if 1970 is taken as the base year (100), the fluctuation is between 98.93 in 1966-67 and 102.29 in 1975, the actual increase since 1970 contrasting very markedly with the British experience. Similarly when 1970 is taken as the base year (100) for the French costs per head of expenditure on personnel, the figures for 1966 in constant dollars equate to 94.27 and to 111.78 in 1975. The increased expenditure in France between 1970 and 1975 in constant figures is thus significantly less than in the United Kingdom and it has to be inferred that much of this increase can be attributed to the

additional pay increases awarded in the all-volunteer force. The conclusion which has to be drawn from this comparison is that while the economic costs of conscription may be high, budgetary data emphasizes that an inexorable effect of the transition to the all-volunteer force is a reduction in total manpower and a concomitant increase in total personnel costs and real costs per head. This supports the contention that in an industrialized democracy with its finite resources, the luxury of an all-volunteer force imposes a severe fiscal burden upon the parent society.

From this conclusion, it can be argued that in the case of the United Kingdom the need to reduce defence expenditure to the NATO average necessitates further reductions in the force size. These cuts to achieve this aim would have to total some 35,000 service personnel, that is to the suggested force level of 300,000, and 20,000 civil servants, but a further issue of concern is whether costs per head even after such force reductions would still continue to rise and subsequently necessitate further force reductions. The two critical questions in this context are why these personnel costs should rise in the first place and whether the rises are an inevitable concomitant of the pay policy which has been adopted for the all-volunteer force.



In answering these questions, rises in costs are frequently attributed to the need to compete in the open labour market for service manpower. This is a popular explanation, particularly amongst servicemen themselves, for increased personnel costs can be rationalized as the result of external market factors rather than the effect of a conscious choice of resource allocation.

It is difficult to assess, however, how far increases in pay which largely account for increased personnel costs, can be directly related to attempts to counteract shortfalls in recruitment and retention rates within the framework of lowered force levels. In 1969 and 1974, percentage increases in pay were specifically requested by the Ministry of Defence because of existing manpower shortages and continued recruitment shortfalls. At the same time, the introduction of a 'military salary' in accordance with the recommendations of the Second Report of the National Board for Prices and Income (1969) brought into being the notion of comparability between earnings in the civilian sector and in the armed forces (22). Subsequently, pay increases have been governed by the findings of an independent civilian committee The Review Body on Armed Forces Pay, which re-examines both pay and charges in the light of the principles laid down by the National Board for Prices and Incomes. Some of the economic effects of this have been summarized by Cockle (23) :

The review mechanism reinforces the organic linking of military and civil economic experiences, by stimulating the direct effects of government economic and social policies within the military sector - - - military wages have a sound economic base in as much as wage costs are related to alternative civil earnings and work preferences - - -

In practical terms this has meant that the armed force have been awarded pay increases of 7% in August, 1971, 10% - 11% in 1972, and 6.5% in 1973. In 1974 when the services asked for a 20% increase in pay and other associated benefits, actual raises were less than requested but in 1975 increases averaged 29.5%. Whether these increases could be justified in terms of movements in the civilian labour market or because of the effects of inflation upon wage rates are two important questions. The alternative and more pertinent issue in the context of this paper continues to be whether the need to compete in a labour market or the wish to establish comparability can be said to impose unacceptable demands upon budget allocation and detract from other defence programmes such as capital expenditure.

The fundamental problem which has to be faced here is that a designed pay policy has to meet a number of competing and often conflicting objectives. Firstly, it has to be a means of competing in an open labour market by offering a rate of remuneration which is comparable with, if not superior to, that offered by the civil sector. In this context, the decision taken in the United Kingdom in 1969 to introduce a 'military salary' based on the principle of pay comparability with the civil sector has had far reaching economic and social consequences. Although the latter will be discussed as a later part of this paper, it has to be noted at this point that the initial economic consequence of this decision has been the increased cost of paying new entrants into the military organization. For the conscript army, in contrast, the basis of reward need not be related to the amount that would entice the individual to choose a military career. 'Therefore most conscripts receive less than that which would notionally attract them voluntarily' (24). In the United Kingdom, on the other hand, the pay system was designed scientifically to attract volunteers through a wage structure which would be amenable to comparison with civil earnings.

The question which has to be asked is whether these increases in pay have in fact attracted the desired number of recruits. Fabyanic in reviewing the trends since 1970 points out that structural improvements to military pay coincided with a period of higher unemployment and stable military force level projections by the government. Pay



improvements were made therefore amidst the most favourable circumstances (25). Even so, recruitment and retention rates have not been satisfactory. Table 5 illustrates the trends in this area since 1970.

What emerges from this table is that while improvements in pay have produced immediate increases in recruits, the strong correlation between unemployment and recruitment may be more indicative of long-term trends. What is also clear is that since 1970, the long term requirement of recruiting some 43,000 male entrants annually has been met on one occasion only. This suggests that despite adjustments to the pay structure of the armed forces, the all-volunteer force finds it difficult to compete in the open labour market simply by raising pay, although this is not to suggest that the Grigg Committee was correct in assuming that a given pay level did not constitute a deterrent to recruitment or that increases would not attract recruits of the right quality (26).

While increased personnel costs can be associated with a recruitment policy these increases are also derived from the other objectives of an adopted structure. A pay policy has to be related to the problems associated with the need to retain within the volunteer armed force an adequate number of trained personnel. Here, an established optimum rate of turnover can further determine the level of reward offered to recruits through giving one rate of pay to

Table 5

Force Strength, Recruitment and Unemployment

<u>Fiscal Yr</u>	<u>Force Strength</u> <u>N (000s)</u>	<u>Required Male</u> <u>Recruits</u>	<u>Numbers</u> <u>obtained</u>	<u>Percentage</u> <u>achieved</u>	<u>Percentage</u> <u>Unemployment</u> <u>In Work Force</u>
1970/71	373.0	49,100	38,900	79.2	3.3
1971/72	368.0	46,300	46,493	100.0	3.7
1972/73	371.4	43,000	39,120	90.7	2.6
1973/74	367.0	43,000	25,800	60.0	2.5
1974/75	349.3	43,000	34,960	81.3	3.3

Sources :

Fabyanic : Table 4

Statement on Defence Estimates 1971-1975.

the short-term recruit and another to those prepared to serve for longer periods. In the British Army this has produced three scales of pay for newly recruited enlisted men : Scale A with a per diem rate for a private of £4.68 (1975); Scale B for those committed to serve for more than six years but less than nine years of £4.98 and Scale C for those committed to serve for nine years or more of £5.43. For officers, a newly appointed second-lieutenant receives £4.92 per diem on commissioning or £6.25 if the officer is attending a Regular Career Course immediately after attending the Standard Military Course at the Royal Military Academy Sandhurst. For enlisted men, these differentials are retained throughout the pay structure and are further expanded by relating pay to the various demands placed upon the individual by the job specification. An evaluation of this when formulating the military salary, produced the conclusion that service employment could be banded in groups so that for a corporal for example, nine different rates of pay are linked to a per diem rate varying from £7.48 to £9.39 (1975). For a staff-sergeant, twelve different rates give a spread of £8.56 to £11.29 per diem. The issue of the extent to which this difference has produced earnings rates which can be compared favourably with pay in the civil sector, invites subjective evaluations. A major difficulty which remains unsolved is that although a highly sophisticated system has been established to create and maintain the principles of pay comparability, the system, itself, cannot eradicate individual perceptions of imagined exploitation or relative



deprivation. The social issues which occur in this area will be discussed in a later part of this paper. What is clear is that if pay scales are affected by the principle that increased pay is necessary to implement a retention policy, then inevitably this will increase total personnel costs, if only because this produces 'overlapping' rates of reward in the sense that an individual on a long-term engagement has to be paid more than those who are less committed to the military career.

An alternative objective of an adopted scale which is in many ways similar to the retention goal, is that of creating and rewarding a career structure. The genesis of such a structure owes much to the Weberian notion that in the rational-legal bureaucracy, staff should be promoted on the basis of seniority or ability or on a combination of these two factors. In the all-volunteer forces in the United Kingdom, this concept of a career has particularly governed the establishment of a pay structure for officers. Whereas the review of enlisted men's pay focussed on trade skills as well as on rank and thereby produced overlapping scales, it was decided that in the case of officers, rank and skill were on the whole closely correlated.

Consequently, the adopted structure reflected two assumptions. Firstly, that pay should rise on promotion from one rank to another and secondly that experience in a rank justified income growth within that rank over a period

of time which varied according to the rank. Both assumptions may seem to be self-evident, but there are innumerable examples drawn from the system applied in other armed forces and in the civilian sector to suggest that the validity of these assumptions is not sacrosanct. When these assumptions, however, are implemented, then it is axiomatic that costs will increase. In the first place, the sum of total personnel costs will vary, in direct relationship to the number of people who are retained over time in a given rank level and who receive successive increments. Whilst this may be offset by the number of people leaving whose replacements are paid at a lower point on the scale for the rank, the tendency for costs to increase is accentuated by the goal of providing a career structure for individuals. In providing this career structure, it is inevitable that when individuals receive virtually automatic promotion to a career grade, the shape of the notional pyramid of the ideal-type bureaucracy changes into a rhomboid as a larger number of officers are retained at a middle rank level. In turn, this 'rank inflation' increases overall personnel costs. The broad based structure of the conscript army in which a large proportion of personnel receive minimum rates of pay, is replaced in the all-volunteer army by a structure in which a high proportion of servicemen have to be paid at an enhanced level to satisfy their expectation of achievement within a promised career.

A comparison of the trend towards career provision in the all-volunteer force of today with provision in the past, emphasizes the complexity of the changes that have taken place. Traditionally in a less technological system, officership was identified with a short-term commitment to the military environment. The need for a large number of officers in junior appointments was thus satisfied through such devices as the short-service commission with its very limited transfer to a permanent career. The notion of a military career was at a discount. Conversely, enlisted men were engaged for long-term periods with a very limited prospect of promotion that was comparable with the system that was, and still is, a feature of civilian employment. Now, the trend towards providing a career structure for officers is balanced by the provision of short-term enlistment for enlisted men. In both instances, personnel costs inevitably increase. For officers, as has been noted, the expectation of promotion produces on its realisation higher total expenditure. For enlisted men, the official wish to move away from short-term notice engagements where the training overhead is not justified by subsequent productivity, has resulted in the provision of additional incentives to encourage a commitment to a longer-term career. Both factors inevitably necessitate allocating an increasing share of a limited budget to manpower costs.

Underlying this wish to provide a career structure for servicemen is the explicit awareness of a further



objective of the adopted pay structure. In determining the remuneration of both officers and enlisted men, a common feature of the pay policy in the all-volunteer force is the recognition of the goal of establishing a socially just reward. Traditionally, this was achieved, if indeed it was acknowledged, through the medium of paying allowances and through the provision within a custodial management framework of ancillary benefits. Since these were not necessarily paid at a fixed rate of universal applicability, these allowances and benefits could be readily amended in response to such factors as a shortfall in recruiting, a wish to retain selected personnel, the removal of grievances and so on. In the United Kingdom, however, the overriding principle that in order to facilitate comparison with the civil sector the wage structure should be as simple as possible, led to the consolidation of a mass of allowances within the military salary. Once the wage structure was established on the basis of comparability, then to meet the demand for social justice it was necessary to weigh the relative advantages and disadvantages of the military way of life. In Britain the net balance was considered to be adverse and a compensatory payment defined as the 'X-factor' was added to the basic rate of pay. This was and is a straight percentage increase on salaries - originally fixed at 5% for all servicemen irrespective of rank but increased to 10% in April 1974. This has thus produced a straightforward increase in total personnel costs, partly mitigated by reducing the percentage paid to senior officers

on the grounds that they are less affected by the postulated disadvantages of military life.

When the notion of social justice is looked at more critically, however, it can be argued that the adopted pay structure created economic pressures which were an inevitable result of an unresolved and fundamental problem. Comparability on the one hand, presumes such a degree of convergence between civilian and military skills that the latter can be evaluated in terms of criteria applicable to the former. The introduction of the 'X-factor', on the other hand, recognizes the degree of divergence between the two sectors.

The interaction of these two presumptions created and continues to create a number of problem areas in which solutions aimed at producing a socially just reward for military personnel cannot be strictly based on rational economic criteria. This is not to suggest that the desirability of achieving social justice is unwarranted. On the contrary, it can be argued that the uniqueness of the military task is such as to justify a rate of reward which can reflect fully the particular needs of different members of an all-volunteer force. What is less satisfactory in terms of its economic effects, is the attempt made to equate two systems of remuneration with widely divergent base criteria and then add an element of reward which recognizes the uniqueness of the military way of life.

One specific difficulty in this context is that, in seeking to establish comparability, evaluation could not fully recognize the extent to which a given rate of reward in the civilian sector was not simply based on the relative effect of the seven factors chosen as the basis for evaluating comparability (27), but was also a recognition of the presence of an 'X factor' within civilian employment. Thus the comparison of civilian and service wage rates for enlisted men was based on earnings, rather than on basic pay excluding overtime, in 728 jobs in 321 civilian organizations. What is uncertain is the extent to which these civilians wage rates reflected not only the operations of a prices and wages mechanism but also the recognition within the civilian sector of such variables as lack of job security, the monotony of work, unsocial hours, productivity, the provision of motivation and so on. Some of these had doubtful relevance in the military system or, if they were relevant, were in the adopted structure doubly recognized in the sense that the civilian 'X-factor' was supplemented by the military 'X-factor'. While it may be socially just to recognize that the particular features of military life justify a rate of pay that is at least comparable with that obtained by the civilian, it has to be questioned whether this justifies the recognition of the disadvantages of the employment situation in the two sectors of society.



The search for social justice in the field of remuneration in the all-volunteer army has thus had the effect of increasing total personnel costs. This is perhaps inevitable, for the notion of social justice is founded on specific normative considerations which may or may not reflect economic rationality. It is particularly significant in this context that pay and reward has been determined not by a global figure representing the total amount that can be "afforded", but by shifts in a civilian labour market over which the military have no control. The consequent fiscal pressures are not unique to the all-volunteer force. Other public service bureaucracies in which the principle of pay comparability governs rates of remuneration are equally affected by external movements in civilian pay. In all these cases the wish to promote social justice implies that if public service employees are to be paid at pay levels commensurate with those obtainable in civilian employment, then the total personnel cost has to be met. This also suggests that the reference to what can be "afforded" in budgetary terms, is a denial of this justice and the exploitation of these employees. The harsh reality of the situation, however, is that there is a perpetual dilemma of rising demands and insufficient resources which forces some amendment to existing dispositions (28). The declared preference for the all-volunteer force in the United Kingdom was for the furtherance of social justice even though this produced an inevitable rise in total personnel costs.

In the United Kingdom, therefore, a situation has arisen in which there is clear evidence that personnel costs absorb an increasing percentage of the defence budget. This is taking place in a financial climate within which there is strong pressure for a reduction of defence spending to a level at which the share of GNP allocated to this sector of public expenditure does not exceed the NATO average. The British experience suggests, however, that the pay policy which has been adopted for this all-volunteer force inevitably increases personnel costs as it strives to meet the needs of competing in a civilian labour market for recruits, of retaining trained personnel, of implementing a career structure and of providing a socially just reward for service personnel. Consequently, if allocation constraints arise as the Government alters priorities in public spending and thereby reduces the share of GNP assigned to defence expenditure very little discretionary choice remains available. On the one hand, capital expenditure can be cut-back further although there must be a limit below which this expenditure cannot fall without some damage to military effectiveness. On the other, the size of the force can be further reduced in an attempt to control the growth of total personnel costs. But, as has been pointed out, per capita costs, even after force reductions, have continued to rise and this does suggest that in exercising a discretionary choice, options open to the British government are further limited by the trend towards more expensive manpower costs.

## SOCIAL COSTS

In evaluating the consequences of basing a force structure on all-volunteer rather than a conscript army, economic costs can be seen, however, to be only one of the factors which shape policy choice. The social effects of innovation in recruitment and structure are equally important determinants of resource allocation. Indeed, from numerous examples it can be argued that an awareness of the social costs of policy decisions is a greater constraint on the exercise of choice than the strictly economic or budgetary implications. In this, as in other instances, the fundamental problem faced by the decision-makers is that the transition from the mass army to the all-volunteer force creates a major professional dilemma. Initially, this can be summed up as the problem of primary motivation. In the traditional army, conscription as a means of recruitment was closely identified with the rights and obligations of citizenship (29), and although opposition to this system and the associated perception of motivation was, and is, not unknown, the legacy of this relationship continues to be most marked. Thus in West Germany, the 1973/74 White Paper on Defence stresses that through military service, conscripts develop a sense of allegiance "to our democratic state". Ex-conscripts, it is argued, display more mature democratic awareness and possess a more positive disposition towards "our political and social system" (30). This theme is also followed in the 1974/75



White Paper in which reference is made to the link between the obligations of citizenship and military service (31).

The Federal Government adheres to the principle of universal conscription. Compulsory military service will continue to be a keystone of our defence effort. It is an essential civic duty.

In neither the United States nor the United Kingdom, has the identification of military service with the rights of citizenship been accepted as a justification for the retention of the mass army. Moreover, it has never been agreed that conscription can be seen as a hallmark of citizenship because it is the means of implementing a universal obligation to defend the democratic state. Indeed, in considering more specifically the British example, it can be argued that the fundamental right of the citizen has been traditionally seen as the right not to bear arms in defence of the country. Consequently, a long-standing British peace-time tradition has developed from the assumption that defence policy can only be linked to the existence of the all-volunteer force structure. The essential problematic issue therefore, is that of defining within this tradition the philosophical basis of the true inculcated ideology of the military man.

For the mass army the underlying hypothesis has been clearly spelt out by Janowitz (32) :

To the extent that mass armies defined their recruits in terms of political and normative notions of citizenship, military service functioned as an essential and necessary contribution towards political institutions.

A normative-based ideology has also been a consistent feature of the culture of the traditional British all-volunteer force, although it has to be noted that there have been considerable differences between the attitudes of officers and enlisted men. For the former, their traditional commitment to military service was closely linked with a wider social obligation to carry out a range of public duties. These obligations, in turn, were a general reflection of an upper class sense of guardianship with its emphasis on traditional shared values and personal obligation. For enlisted men, however, the initial commitment to military service was much more utilitarian in its origins. The tendency to recruit individuals who were in some way deprived and who were thus attracted by the immediate rewards which military service brought them, was balanced by the consistent recruitment of personnel who were motivated by an awareness of the eventual rewards to be gained from a military career. For both these latter

groups a structural normative-based ideology could only be developed through secondary socialization within the ship, regiment or squadron and although the effects of this socialization was reinforced by the paternalistic concern of officers, it was essentially a gloss on a basic utilitarian philosophy.

In the contemporary all-volunteer force structure of the British military, the legacy amongst officers of this normative-based ideology dies hard. Garnier in an analysis of the relationship between technology, culture and officer recruitment, thus notes that traditional patterns and criteria of recruitment still prevail even in a highly technological army (33). But the search for ideological conformity based on a normative commitment to the military is increasingly affected by the appearance of the calculative orientations of both aspiring and serving group members. This is initially reflected in recruiting policy and it is evidenced in the changed tone of recruiting advertisements. Thus an October 1976 advertisement designed to attract graduates is based on a "bursary scheme" for students. The heading, 'Undergraduates can now get £900 a year without signing their lives away' is followed by a text which stresses that selected students will receive financial help during their university course, will from the time they graduate receive a salary of £3,637 per annum for three years and will finally be given £1,395 tax free on leaving the army. The emphasis placed on the instrumental advantages of a military career is most marked :



The only difference between you and other students will be the Army's financial backing for your degree and the guarantee of an exacting and rewarding job when you graduate.

The economic and social implications of this and other schemes of officer recruitment are very considerable. The selected example is illustrative of the extent to which the perceived need to compete in an open labour market inevitably increases total personnel costs. The salary paid to the twenty-one year old graduate compares most favourably with that offered in the civilian sector (34), particularly since the cost of the bursary and the terminal grant must be added to the basic salary cost. The cost-effectiveness of three year short-term engagements is at the same time very questionable. One of the consistent criticisms in the 1950s of the utility of conscription with its two-year period of service was that the achieved 'productivity' did not justify the training and recruitment costs. Clearly, a similar criticism can be made of the three year engagement

today particularly in view of the major increase in these costs, as the changing demands of a technological force necessitate the provision of longer and more sophisticated training programmes. In addition, the continual turn-over of personnel produces a degree of instability that is incompatible with that notion of professional commitment which is seen to be a basic characteristic of the all-volunteer force structure. Concomitantly, this instability generates increased training and assimilation costs if only because of the need to provide repeated courses to meet the needs of a continuing input of newly commissioned officers. It is therefore significant, in this context, that the adopted policies of the United Kingdom and West Germany show a marked divergence. For the former, the transition to the all-volunteer force after 1957 was characterized by a move away from these short-term engagements. Subsequently this trend has been reversed even though the criticisms which were made of the utility of conscription are still valid. In the Federal Republic, in contrast, positive steps have been taken to discourage short-term engagements. A comparison with current procedure in West Germany thus

shows that in the Bundeswehr the pay of short service volunteers has been reduced from January 1st, 1976, in that they will in future be paid like conscripts during the first six months of service: only from the seventh month onward will they draw regular pay. Moreover, short service volunteers having first enlisted or extended their service, after September 10th, 1975, will receive reduced transition allowances at the end of their service. This attempt to reduce costs and thereby discourage short-term engagements, contrasts markedly with the adopted British system which is increasing rates of reward and the associated benefits and is thus designed to encourage a limited commitment to a military career.

The social implications of these schemes are equally marked. They are based on a realistic awareness of a situation in which it can no longer be presumed that aspirant officers will be primarily motivated by a sense of public duty. Among these officers there has been a marked shift from a normative ideology with its concomitant sense of moral commitment to a utilitarian/calculative perception of the advantages of military service. Such a shift moreover may be particularly pronounced amongst those candidates destined to serve in units which are concerned with the secondary and tertiary levels of military functions, that is, the 'non-fighting' units. This is reflected in Garnier's analysis of the degree of ideological conformity amongst cadets at the Royal Military Academy at Sandhurst.



He concludes that the fighting regiments - aristocratic and nonaristocratic - recruit higher proportions of high conformists orientated to the maintenance of traditions than do the artillery/engineers who, in turn, recruit more than the technical **formations**. Similarly, cadets destined for elitist regiments were, at the time of Garnier's survey, more likely to support "conformist" ideas, many of which were derived from the traditional normative ideology, than were cadets who had been accepted by technical regiments (35).

One conclusion which can be drawn, therefore, is that even if the all-volunteer force can continue to recruit an adequate number of normative-orientated candidates for the 'elite' fighting **formations**, the maintenance of the remainder of the force structure is dependent upon the recruitment of aspirants who may possess a more utilitarian - calculative orientation. This dependency, moreover, is increased if the force seeks to widen the basis of recruitment in striving to ensure that the social composition of the force is representative of society at large. Such a policy reflects the argument that the military in a democratic state cannot continue to implement a system of social selectivity. A disproportionate reliance on particularistic sources of recruitment may ensure that selected officers are more likely to be inculcated with the desired normative orientations, but the dysfunctional consequences of such a policy are most marked. A highly unrepresentative officer

corps weakens the legitimacy of military institutions. Selective factors in recruitment tend to increase the conservative political bias of this officer corps. They may also produce more rigid attitudes towards innovation and technological change. Yet a move towards a wider base of officer recruitment raises the question of the extent to which in the all-volunteer force a fundamental social problem is that of ensuring that aspirants with initially different motivation will respond equally to a socialization process which seeks to attain a high degree of ideological conformity.

This conformity has consistently been seen as an essential characteristic of the military way of life. It reflects, it is argued, an awareness of a common sense of purpose. It facilitates the exercise of social control within the organization. Its existence is the basis of a developed authority structure, for it legitimizes the exercise of power on the grounds that this is derived from the shared values of the group. Yet the search for conformity may be most difficult if the utilitarian/ calculation perceptions of some officers are indicative of internalized attitudes which are highly resistant to change.

The issue of these attitudes towards service in the all-volunteer force is, moreover, not only a question of the motivation of aspirants. It is apparent that there is a comparable shift of ideology among serving officers. Numerous explanations can be put forward to account for this.

Werner, for example, in discussing the growth amongst Belgian officers of a preference for group representation within the armed forces, suggests inter alia that this is attributable to a growing sense of relative deprivation as officers become aware of increased economic reward and improvement of conditions in the civilian sector (36). Certainly, this sense of relative deprivation can be noted amongst British officers in the contemporary all-volunteer force. Indeed, it is encouraged by the principle of 'pay comparability' which is a basic feature of the military salary. In this context, it is significant that the pre-1970 pay structure was so complex that individuals were unable to calculate their emoluments. Thus a 1969 survey indicated that 44% of the officers and 51% of the enlisted ranks were unable to estimate correctly their pay within 10% (37). One result of this was that pay comparability was virtually impossible and a sense of relative deprivation, where it existed, was rarely associated with a perception of income differential. With the introduction of the military salary, however, the concept of pay comparability encourages officers to seek out a reference group, to identify with group members and to compare critically pay differentials. This tendency is also reinforced by the increased importance in the all-volunteer force that is placed on the growing convergence of the military and civilian system. As part of a perceived change in the basis of military authority as an authoritarian style of control is replaced by a management style based on persuasion, officers repeatedly conclude that



their role and skills are directly comparable with those of professionals in the civilian sector. The stress thus placed upon comparability of pay, role and skills, particularly management skills, inevitably leads many officers to identify themselves with an external reference group.

In drawing comparisons between their situation and that of members of these designated reference groups, many officers, especially those already orientated to a utilitarian / calculative ideology, are affected by a sense of relative deprivation. Whether this sense is based on a true assessment of relative positions is largely unimportant. Objective and value-free comparisons based on empirical evidence are difficult to establish and the effect of their absence is accentuated by the extent to which officers noticeably those in the lower and middle rank grades, are largely unaware of the 'real' position in the civilian sector. There is thus ample evidence, amongst these officers, of a tendency to select as the basis of comparison an unrealistic reference group. Frequently this is defined in terms of a narrow range of subjective and personal criteria, which are derived from a mirror image and which do not include an evaluation of such factors as accountability, the locus of decision-making, the civilian career structure and the requisite experience demanded from members of the reference group. The result of this inability to escape from the constraints imposed by the utilization of an imperfectly selected reference group as the basis of comparison, is that

an increasing number of officers in the all-volunteer force are affected by a sense of relative deprivation which is both a cause and effect of utilitarian and calculative attitudes.

The extent to which this sense of deprivation is indicative of a complex set of perceptions is clearly reflected in a study of the attitudes of Royal Air Force officers. James (38) in looking critically at the reaction of these officers to the question of their social and financial status, shows how the overall sense of relative deprivation is closely related to the ongoing occupational activities of these officers. He draws attention to two very pertinent observations. Firstly, officers who are employed in roles which have a direct relationship to the primary objectives of the organization, that is pilots and navigators of aircraft, are less likely to be dissatisfied with their social and financial status than 'marginal' officers employed in support roles. This conclusion, is thus a confirmation of the hypotheses postulated by Garnier in his analysis of the attitudes of cadets at Sandhurst. Secondly, James concludes that the middle rank officers who formed the bulk of his sample are considerably confused about the precise role definition of members of the reference group with whom they compare themselves : (39)

However, discussion showed that many officers were unable to distinguish between the Chartered Accountant, claiming

professional status and operating as a self-employed consultant, and the employed book-keeper or general clerk --- . Similarly, in discussion some officers appeared to have misconceptions about the training and function of the Civil Engineer, confusing him with the civilian engineer or mechanic.

One tentative conclusion which can be drawn here is that in the all-volunteer structure, in comparison with the conscription force, there is, despite the proliferation of skills in the contemporary military, less awareness of the precise dimensions of civilian job specifications. In the conscript force, there is an awareness, possibly an enforced awareness, of changes in the civilian occupational structure since conscripts bring with them into the military organization their professional and technical skills. Clearly, the degree of this awareness will be diminished if the mode of conscription is a form of selective service which largely excludes from recruitment the possessors of certain occupational and professional skills. Nevertheless, interaction between civilian and military occupational structures is still greater than in the all-volunteer force where there is a tendency, particularly amongst longer serving personnel, for military men to live in occupational and professional isolation (40).



This sense of isolation and the associated inability to establish a rational reference group with whom individual status can be compared, is as marked for enlisted men as it is for officers. Indeed, the former may suffer from a greater sense of relative deprivation and status uncertainty, for in selecting a reference group it is often not clear whether this should represent and reflect claimed management skills or a basic technical expertise. In addition, many primary military skills have, at this rank level, no directly comparable civilian counterpart. The consequent status confusion can be most marked. Again, whether the conclusions which individuals reach are valid or not is a largely immaterial consideration. What is important, is the extent to which the sense of relative deprivation is by reflecting attitudes and perceptions indicative of individual motivation. The critical question, therefore, is whether enlisted men in the all-volunteer force feel that they are deprived when they compare their conditions of service such as the rate of reward with that of their perceived civilian counterparts. If these feelings are a common characteristic of contemporary attitudes - and further research is needed in this area - then it can be argued that the volunteer serviceman is prone to conclude that society does not accord to him the just rewards which he deserves. This conclusion implies that these enlisted men are likely to suffer from a feeling of general alienation in that there is an apparent contradiction between their awareness of the rewards given them by society in terms of prestige and remuneration, and

their assessment of the worth of the service which they render to the community.

This is no novel problem. It is symptomatic of attitudes within other armed forces of contemporary Western industrialized society. Thus Teitler in tracing the growth of the demand for trade unionism among Dutch enlisted men, stresses that the defence hierarchy in the course of the 1960s had already abandoned the idea of constructing a normative organization. He suggests that the inculcated ideology of the military man, both officer and private soldier, has never found many supporters in the West. Consequently during a period of détente, the defence authorities set out deliberately to give to the military the standing of an attractive organization offering changes of promotion, interesting work and a good salary. Teitler sums up the associated changes in military attitudes very clearly (41),

So instead of appealing, in accordance with tradition, to normative compliance, they correctly realized that in modern Western society an appeal to utilitarian and social-normative compliance opened up perspectives with regard to personnel policy, even for the military force.

Accordingly, the transition taking place in the British

all-volunteer force structure may be interpreted as a single example of more wide-spread trends within Western armed forces as a whole. That is to say, the tendency towards the emergence of calculative rather than normative attitudes amongst British officers and enlisted men is indicative of a universal trend rather than of a particularistic phenomenon peculiar to the all-volunteer force structure.

Be that as it may, the critical social issue for such a force is that these changing attitudes largely contradict a traditional view of the component parts of military professionalism. The profession of arms has been consistently seen as 'one of the fundamental pursuits' (42). The notions of commitment, expertise autonomy and responsibility which can be identified as the characteristics of professionalism are here supplemented by the emphasis placed upon the significance of service as a feature of the professional ethos. This, then, is the nub of the dilemma. At one extreme, the trend towards a calculative and utilitarian approach to service in the all-volunteer force, a trend derived from the emphasis placed on economic incentives and advantages, produces if carried to a logical conclusion the creation of a mercenary force. The resulting problem is succinctly summarized by Janowitz (43).

Military men do not want to think of themselves as mercenaries and a democratic society cannot treat its military as if they were mercenaries.



At the other extreme, a reaction to utilitarianism and calculation can lead to the deliberate conservation within the all-volunteer force of certain traditional norms and values which are seen to be indicative of an ideal-type professionalism. As a concomitant, considerable emphasis is placed on the prescriptive right of the professional to authoritative judgment in his own sphere. This is a claim which if carried to the extreme identifies the all-volunteer force as the 'saviour of the nation'. The role of the military is then seen to be its actions as the symbol and guarantor of selected values which represent all that is 'good' within society.

The major professional dilemma for the all-volunteer force is the need to strike a balance between these two extremes. The essential problem is the difficulty of guaranteeing 'the required mixture of numbers and quality of personnel, especially of the most dedicated and innovative types' (44) in an all-volunteer force that has to compete with other occupations and organizations for the recruitment and retention of personnel. The social and economic costs of emphasising the extrinsic advantages of a military career are unacceptable to a democratic society. Conversely, any over-emphasis placed upon the need to retain as criteria of selection a highly selected set of normative values, encourages the recruitment and retention of military men whose attitudes and ideology are unrepresentative of the values of the parent society.

In analysing further the characteristics of the occupational ideology of the all-volunteer force structure in Great Britain, research has concentrated upon the examination of officers as a group rather than upon enlisted men. In part, this reflects the conclusion that although the career-enlisted ranks form a type of craft or skill group, it is only the officer corps which is a specialized profession (45). It is also a recognition of the extent to which the custodial features of the military as an organization encourage a secondary socialization process which is heavily dominated by the paternalistic attitudes of these officers. In this process, officers' perceptions and attitudes are important determinants of an occupational culture which enlisted men, irrespective of the existence of their specific sub-culture, are expected to accept as the basis of their value-system. Accordingly, research has been directed towards the analysis of those factors which are deemed to be illustrative of these perceptions and attitudes. Thus variables such as occupational and professional inheritance, social representativeness and previous educational experience have been identified as significant contributors to the creation of an established value-system.

In this context, the key role of the public schools in the education of the British elite is frequently stressed (46). There is an implicit assumption that this specialized education in a small number of major boarding schools has had a considerable effect upon attitude formation (47). More

specifically, it has been argued that the officer corps has traditionally shown a heavy dependence on the elite sector of education (48). Data gathered by the Prices and Income Board (Table 6) thus suggests that as late as 1969 almost half of a sample of 449 officers in the British Army had been educated in a public school. This public school domination is also reflected in the Grigg Report of 1959 which showed that of the 6,171 entrants to Sandhurst between January 1947 and January 1958, 67 per cent came from public schools. Nevertheless, a number of studies have concluded that the size of the public school contribution to Sandhurst has declined in recent years. Thus Garnier concludes that in 1967 the public schools provided 45.7% of the entrants to Sandhurst compared with 51.6% in 1957 and 65.1% in 1947(49). Otley on the basis of a different system of school classification, stresses that Sandhurst was marginally more open to grammar school boys in the 1960s than in the 1950s, in that some 18% of entrants in 1962 and 32% in 1967 came from the state grammar schools (50). Subsequent studies suggest that a wider base of social base of officer recruitment has radically affected the nature of the Sandhurst entry in recent years. Dietz and Stone thus note that the traditional pattern of recruitment has considerably altered (51).

Between 1966 and 1969 the proportion of public school boys of the total number of cadets entering Sandhurst was 52%; this proportion fell in 1970 to 49% and in 1971 to 37%. This



Table 6

School Background of Serving Officers in the British Army, 1969

<u>Rank</u>	<u>N</u>	<u>School</u>		
		Public %	Grammar %	Other Secondary %
Captain and below	217	43	37	18
Major and above	232	51	34	11
	449	47	35	14
				3

Source : National Board for Prices and Incomes, Report No 116 (London : HMSO, 1969  
 Cmnd 4079)

Table 7

Educational Background of Army Officers  
Short Service Commission Graduates at RMA Sandhurst  
 December 1976

<u>Unit</u>	<u>N</u>	<u>Public Schools</u>		<u>Type of School</u>		<u>Secondary Schools</u>	
		<u>Major Boarding</u>		<u>Others</u>		<u>Welbeck</u>	<u>Others</u>
Aristocratic	22	45.4%		54.6%		-	-
Infantry	14	14.3%		78.6%		-	7.1%
Scientific Corps	10	-		70.0%		-	30.0%
Technical	5	-		20.0%		20.0%	60.0%
	51	23.5%		60.8%		2.0%	13.7%

Notes : Units

Aristocratic : Guards and Cavalry

Scientific Corps : Artillery and Engineers

Schools

Major Boarding : The nine 'Clarendon' Schools.Other Secondary Schools : Grammar Schools, Comprehensive Schools and  
Scottish Academies.

means that the position since 1958 has been reversed. Before 1958, two-thirds of the Sandhurst entry were from public schools; today about two-thirds of the entry are from other schools.

In relating this change in the base of recruitment to the question of the formation of an occupational ideology, it is, however important to note three points. Firstly, the educational experience of officers was and continues to be that of a minority of the population. Prior to the phasing-out of grammar schools in society and their replacement by comprehensive ('high') schools, more than 80% of an age cohort were educated in institutions other than public or grammar schools. Yet the officer corps is recruited almost exclusively from the minority group. This is inevitable if the pre-entry educational standard is set at a level which presumes that aspirants have been educated beyond the minimum school leaving age of sixteen (52). But this in itself does not explain the continuing pronounced dominance, particularly in the Army, of public school education as a characteristic of officer recruitment. Indeed, from time to time this dominance continues to be most marked. This is seen in Table 7 which is based on graduation at the Royal Military Academy Sandhurst in December, 1976.

A second point of importance is that there may be



considerable differences among different parts of the military. Thus of the 46 Royal Air Force officers who graduated from the RAF Officer Cadet Training Unit at Henlow at the same time, none had attended a 'highly prestigious' public school and only one officer had been a pupil at a minor public school. This difference suggests that within the all-volunteer force, inter-service perceptions of desirable criteria of selection show considerable variation. For a highly technological service, excellence in subsequent education at a cadet college or on a training course cannot make up for any deficiencies in the basic educational process. Since these courses are not intended as remedial education, then the most significant of the educational selection criteria is that which measure intellectual achievement and potential. For the less technological service, the need to recruit officers of educational ability is tempered by the belief that character rather than intellect continues to be as an important determinant of suitability. In this respect, comments made in 1924 on the recruitment of officers to the Army have a continuing applicability (53).

It is much to be desired that first-rate brains should be attracted into the Army. It is not necessary, nor is it wholly desirable, that all or even the majority of regimental officers should be intellectuals. In the case of all, however, it is necessary that there should be

certain qualities of character, of which the capacity for leadership is the most obvious example.

Given that the emphasis placed on leadership concomitantly presumes that this quality of character is most clearly evidenced by the public school boy, then it is axiomatic that the selected officer corps will be educationally and, by extension, socially unrepresentative of the wider society.

Thirdly, whilst similar criteria of selection will be found in the conscript or mass army, universal acceptance of their applicability and validity is lessened by the presence of conscripts. The set of values which is seen by the regular career officer to be of importance is more likely to be challenged by conscripts whose commitment to the organisation is transitory. Conscripts are in but not of the military. They retain external reference groups and as cosmopolitans rather than locals, the relatively short period of assimilation and socialization which they undertake does little to alter those internalized attitudes which are highly resistant to change. As a result, the inculcated ideology of the military is rarely accepted, for the overall pattern of officer recruitment differs radically from that which is adopted in the contemporary British force structure.

This pattern of recruitment is, however, a reflection of a traditional British cultural pattern and taken in isolation

its applicability in cross-cultural analysis is perforce limited. It is, nevertheless, a significant indicator of the extent to which an all-volunteer force is associated with selective social characteristics. Additionally, these characteristics, which can reflect occupational and professional inheritance, social representativeness, and previous educational experience, are important determinants of a created value-system. Thus in analysing further the dimensions of an occupational ideology we are forced to consider how far this ideology can be linked to these characteristics. In this respect, the fourth observation to be made on the relationship between occupational culture and previous educational experience is that the inculcated ideology is presumed by the military establishment to be universally acceptable. The process of social control which is implicit in the selection of recruits to any organization, is designed within the armed forces to ensure that basic value and loyalties are acceptable to the potential officer. The presence of anticipatory socialization is then developed in an assimilation process which is attractive to aspirants who have already internalized these values and to those who from the moment of recruitment are prepared to be imitative. Consequently, it can be argued that the precise nature of the previous educational experience is largely immaterial. What is important is the extent to which recruits have undergone a period of pre-service education which has conditioned them to accept not only certain consensual values but also to demonstrate a normative rather than utilitarian approach to



the demands of the employing organization. In the United Kingdom, it is apparent that within the all-volunteer force these conditions are held to be most readily satisfied by aspirants with a specific type of educational background. For the Army - and to a lesser extent for the Royal Navy - this is primarily associated with public school education ; for the Royal Air Force, it is linked more generally with the state system (54).

In both cases however, the perpetuation of an occupational ideology relies very heavily upon the intervention of the organizational elite. The final comment to be made, therefore, on the link between military culture and previous educational experience, is that the experience of members of the elite in the all-volunteer force may be an important determinant of expected attitudes and values. What is significant in the contemporary British Army is that this elite is now more educationally exclusive than ever before. Otley sums up the current position very clearly (55).

The upper army elite of 1971 was actually more public school dominated than any other (representative) cross-section of the army at any time in the 160-year period surveyed here. The same pattern is evident with respect to the contributory role of the major public schools, for this too achieves its highest ever level in the upper army elite of

1971, and this too represents the highest level of major school contribution to any sector of the army at any time (with one exception: RMA 1930). In other words the upper army elite of 1971 is the most educationally exclusive officer grouping ever.

Again, it would be injudicious to conclude that such an elite group is to be found only in the all-volunteer force. Whilst the characteristics of this British elite group reflect a national culture that is not necessarily found elsewhere, the existence within the military system of an elitist centre is a universal phenomenon in both volunteer and conscript forces. Nevertheless, the existence of such an elite within the all-volunteer force does pose specific problems if the expected values and attitudes which form the base of an inculcated ideology are primarily derived from extra-occupational experience. The effect of this in such areas as recruitment policies, attitudes towards in-service training and education staff development and innovation are uncertain, but it can be argued that the existing form and structure of the force are considerably affected by the persistence of these dominant values.

### CONCLUSION

From a survey of the implications of the economic and social costs of the all-volunteer force, certain tentative conclusions can be drawn. Whilst these are derived from the British experience since 1962, and thus reflect the

particular effect of a national culture, they do have a wider applicability in that they are indicative of more universal trends. To look at these effects more specifically :

1. It would appear that the economic costs of an all-volunteer force within an industrialized society inevitably increase to a level which becomes politically unacceptable. Not only are the total costs, in terms of the share of the Gross National Product allocated to defence expenditure, seen to be unacceptable but the costs of foregone alternatives also become an issue of considerable concern.

2. In an attempt to overcome the stress to which this gives rise, specific policy decisions are made. These seemingly follow an established pattern :

- a) The first step which is taken is that of reducing those overseas commitments which are seen to be anachronistic and of peripheral importance to a more rigidly defined national defence policy.
- b) As costs continue to escalate, the redefined role is marginally amended. The 'basic' role has to be maintained but this objective has to be achieved



in a situation in which resources allocated to the role are positively reduced.

c) These cuts are progressive until the point is reached when the military establishment and the political power disagree about the ability of the force structure to sustain the amended and diminished role.

3. Notwithstanding the operation of planned cuts, the effect of increasing personnel costs is such that there is a marked shift in the proportions of the defence budget allocated to personnel (including support) costs and to capital expenditure on equipment. Consequently the savings which were envisaged through a shift from the labour intensive mass-army to the capital intensive all-volunteer force structure cannot be fully realised.

The decisions which have to be taken in this field are essentially political ones. Given that civilian control over the military system is a cardinal feature of Western democratic society, then the final decision in areas of resource allocation has to be taken by the civil power. This creates a degree of civil-military stress but in arriving at a decision the political power has to take into account not only

the needs of the military establishment but also the perceived wishes of the electorate. Attitudes in this context, however, are derived not only from an awareness of the economic costs of maintaining the all-volunteer force in being, but also of the social costs of this structure. The formation of these attitudes is complex :

1. With the cessation of conscription, the all-volunteer force over time becomes increasingly unknown to the public at large. To an ever increasing proportion of the working population the military is a 'foreign' institution. Evaluation, therefore, tends to be prejudiced in that it is not based on personal participation in the working of the all-volunteer force.

2. The force structure, needing to compete in the open labour market for recruits, is faced with the dilemma of reconciling the expediency of emphasizing the extrinsic advantages of a military career with a wish to maintain specific normative standards. A tendency to emphasize the former has dysfunctional consequences :

- a) External evaluation concentrates on the apparently privileged position of the military in terms of the rate of reward, conditions of service and so on.

b) Within the force structure, the emphasis placed on the comparability of the military and other large scale organizations frequently produces feelings of relative deprivation as individuals compare themselves with an external reference group.

A tendency on the other hand to emphasize the need to maintain an established value-system within the force structure, also creates certain difficulties :

- a) The pattern of recruitment is seen by the public to emphasize the importance as criteria of selection of values and attitudes which are not representative of the parent society.
- b) These criteria encourage recruitment from traditional sources of **manpower**. The all-volunteer force, in consequence, becomes socially unrepresentative.
- c) The military elite, selected by a sophisticated form of social control, perpetuates the maintenance of a seemingly closed system which in an extreme form is held to be socially divisive.

The possible consequences of this upon long-standing issues of civil-military relationships have been well



documented. The critical question as Janowitz has stressed, is that of ensuring civil control of the all-volunteer force structure (56).

Under the all-volunteer system, the need to contain the pressure group influence of the military remains an overriding goal. There is no reason to suppose that civilian control will become a simpler and more manageable task.

Indeed, the impact of the economic and social costs to which reference has been made is such as to introduce new dimensions into the established and traditional pattern. The nub of the question would seem to be the force of civil and military reaction to decisions involving resource allocation in a situation in which there is a propensity towards internal rigidity in the all-volunteer force and a well-defined boundary between the military and the parent society. This can be interpreted as a situation in which, in the absence of a consensus of values, there is a degree of competition between the military and the civilian sector as each seeks to maintain or increase its share of finite resources. It is this competition and such aspects of the derived reaction as the demand for some form of group representation, the questioning of the viability of the stipulated military role or the failure of military personnel to integrate into civilian society, which largely characterizes contemporary civil-military relationships.

British experience suggests that on balance the all-volunteer force has been able to meet a diminishing manpower requirement - although at increasing economic and social costs. It would be folly to suggest that the difficulties which have been encountered necessitate or even justify a return to some form of conscription. Equally, it would be foolish to ignore the strains which arise as the needs of society impose constraints on the share of scarce resources which can be allocated to the military sector. But the all-volunteer force is not a static organization. Its form and structure is not sacrosanct and in the final analysis it can be argued that the military in an advanced industrial society reflects that society and that it adapts, albeit after a time-lag, to the economic and social constraints which are imposed upon it.

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34. The higher rate of reward which is paid to the newly  
commissioned graduate can be seen from the following  
figures :
 

Commissioned Officer :	£3,637
Civil Service (Executive Officer) :	£2,468
Management Trainees : (Industry)	£2,600 to £2,800
Teachers (Graduates) :	£2,965
Local Government : (Administrative Grades)	£2,800 to £3,500
Chartered Accountants :	£2,600

I am indebted to the Careers and Appointments Services of  
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55. Otley, loc cit.
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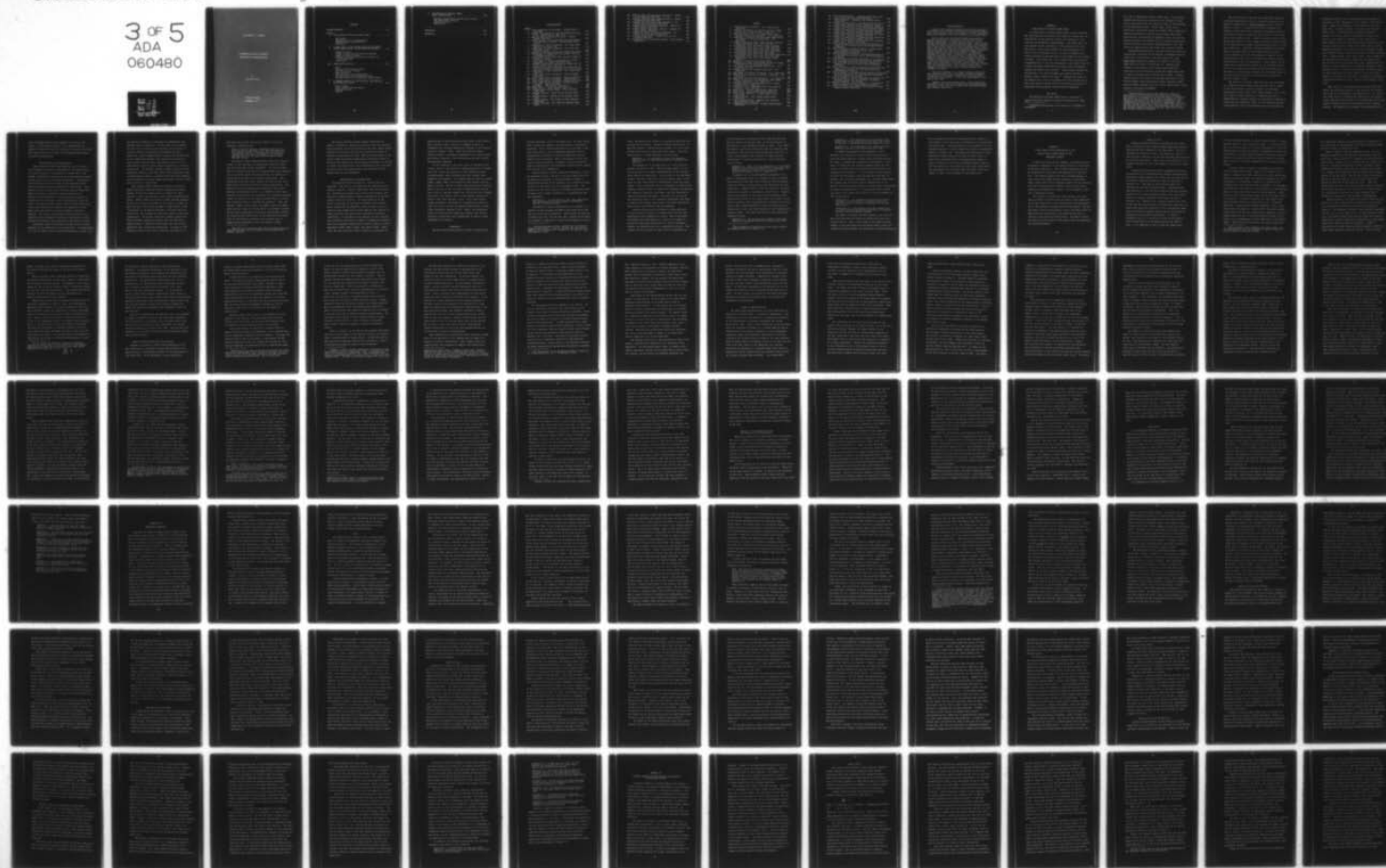
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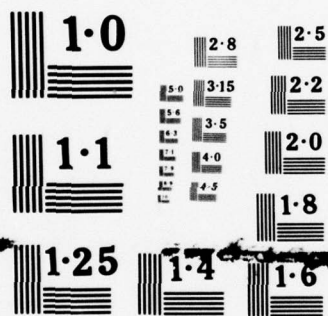
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THE UNIVERSITY OF CHICAGO

A COMPARATIVE ANALYSIS OF MILITARY  
INSTITUTIONS IN DEVELOPED NATIONS

BY

GLEN DAVID CURRY

CHICAGO, ILLINOIS

DECEMBER, 1976

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This dissertation is to a great extent a product of the lifelong intellectual aspirations of Morris Janowitz to analyze the intricate relationship between military institutions and society. I feel very privileged to join him in this task.

Finally, on a more personal note, I must express my gratitude to my wife for her typing and her understanding, but, most of all, for that portion of my time which would have normally been hers.



## CHAPTER I

### THE DECLINE OF THE MASS ARMED FORCE

In recent years a growing number among social scientists who study military institutions have begun to contend that the armed forces of the developed nations are undergoing a substantial and fundamental transformation. One label which has been applied to this phenomenon is "the decline of the mass armed force," while other authors use the designation "the rise of the all-volunteer force," in order to emphasize the central position of the abolition of conscription in the pattern of events. This paper will seek to analyze this institutional transformation as it has been manifested in the armed forces of a subset of highly industrialized nations with parliamentary regimes and capitalistic economies. These nations include the United States, the United Kingdom, the Federal Republic of Germany, France, Sweden, and Japan.<sup>1</sup> Although the extent of the analysis will vary in accordance with the availability of data, the overall strategy will be to search out patterns of uniformity and variegation across national boundaries.

#### The Theory

The decline of the mass armed force is an effort to express historical change in military institutions in terms

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<sup>1</sup>A detailed description of the data set is included in an appendix.

of a set of sequentially related ideal types. Its roots are entwined with historical theories on the emergence of democratic institutions and the "nation in arms" at the beginning of the nineteenth century. Alfred Vagts (1959) notes a qualitative distinction between the feudal armies composed of nobles and mercenaries and the citizen armies which drove them from the field during the Napoleonic wars, and the commonality between these modifications in military institutions and the political and economic transformations of the same period are emphasized by Feld (1975) and van Doorn (1975b).

Contemporary discussion of the mass armed force bears no intellectual connection to the theories of Hoffman Nickerson (1940) who in his history of the mass armed force, The Armed Horde prematurely announces the demise of the mass armed force just prior to World War II.<sup>1</sup> Somewhat more relevant is the account of the links between political traditions and the maintenance of the mass armed force model in inter-war Europe given by Shelby Davis (1937). Verrier (1966) discusses the history of the mass armed force in the United Kingdom, while Andrzejewski (1954), Marshall (1950), and Levy (1966) consider the role of mass armed service in the process of national development.

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<sup>1</sup>Though Nickerson uses as his theme the effect of political and social change on the structure of military institutions, he arranges his historical facts as convenient decoration for a diatribe on the evils of democracy. His detailed narrative of how the spread of democratic ideals undermined and reduced to barbarism the gentleman's art of warfare through the growth of the mass armed force rests side by side with his book's final 1940 conclusion that due to the military ineffectiveness of the mass armed force, World War II would remain a stalemate.

The first awareness that the mass armed force might be a passing organizational form in the Western industrialized nations is expressed in a Military Review article by Morris Janowitz (1972a). In another article the following year, Janowitz (1973) details the structural consequences which are the results of such a formulation for the case of the United States all-volunteer force. Jacques van Doorn (1975a) of The Netherlands makes the first attempt to present a unified theory of the organizational changes associated with a decline in the mass armed force. From three different meanings of the word "mass," van Doorn defines a mass armed force in terms of (1) its absolute size, (2) the homogeneity implicit in its organizational forms, and (3) the degree of societal mobilization necessary for its maintenance. A much longer list of armed forces characteristics which can be considered indicative of or related to the decline of the mass armed force is included in a working paper prepared for an Advisory Panel of the Inter-University Seminar on Armed Forces and Society (Harries-Jenkins, 1973).

The decline of the mass armed force has been attributed to a number of causal factors which include, (1) the impact of the introduction of nuclear weaponry on traditional organizational forms (Aron, 1955, 1968; Janowitz, 1971, 1974), (2) a major cultural evolution in advanced societies as exemplified by a greater emphasis on individual as opposed to state interests (Janowitz, 1976), (3) the resultant decline in nationalism, and (4) the modification of the previously



established roles of the military within the government of its parent society (Huntington, 1957; Janowitz, 1971; Mills, 1956). Among the consequences of the decline of the mass armed force, van Doorn (1975a), citing the work of Hackel (1970), notes a redistribution of personnel among the branches of service, which is principally a result of the decline of the number of personnel in the ground force. Nancy Goldman (1971) has been particularly concerned with the increased utilization of women in the armed forces; and the augmented employment of civilians in the performance of what were formerly military tasks has also been discussed (Janowitz, 1971). Charles Moskos (1970, 1971, 1973), long a student of the assimilation of minority groups into the armed forces, has recently raised the spectre of an over-representation of blacks in an all-volunteer force (Janowitz and Moskos, 1974). Probably the most challenging speculations on the decline of the mass armed force are to be found in those works which explore the possible societal roles of new forms of military organization (Schelling, 1962; Janowitz, 1975; Moskos, 1973, 1975).

What evolves is a macrosociological theory which integrates the dialectical aspects of the military as an organization and as an instrument of national policy. The task of this study will be to examine the viability of the decline of the mass armed force theory as an intellectual tool in the study of change in military institutions in the twentieth century. To accomplish this requires the delineation of a

set of phenomena which can be regarded as a core for the theory. In the present context, it is assumed that the purposes of empirical analysis will best be served by positing this theoretical core in terms of the organizational aspect of military organization.

### The Military as an Organization

Morris Janowitz (1971a) has proposed that "to analyze the contemporary military establishment in the United States as a social system, it is necessary to assume that it has tended to display more and more of the characteristics typical of any large-scale, non-military bureaucracy." Historically the military was one of the first of what Max Weber would label rationally organized bureaucratic institutions. Still Janowitz points out that there are major features which have made the military a singularly unique societal entity. Despite an acute awareness of the calculation essential to a high level of efficiency in the coordination of goals and means, the linkage between military goals and the utilization of force and violence has enhanced the importance of what Weber would have called irrational elements in military behavior. The extent to which these divergent factors have influenced the development of military institutions has been extensively debated by Huntington (1957) and Janowitz (1971a).

Stinchcombe (1965) unreservedly includes military establishments in his definition of an organization. An organization is "a set of stable social relations deliberately created, with

the explicit intention of continuously accomplishing some specific goals or purposes." He then takes as his example of such a set of stable social relations an army with its societal function of offensive and defensive military operations. While organizational sociology has obtained most of its significant findings from research on non-military institutions, there has been some moderate success in the application of general organizational hypotheses to military institutions. For example, Childers, Mayhew, and Gray (1971) and Mayhew, Childers, and James (1972) find respectively that a random baseline model of differentiation and Zipf's harmonic series hypothesis of social organization apply to thirty-seven units of the U.S. Coast Guard.

Most organizational studies of military institutions employ theoretical approaches which accentuate the unique features of military organizations or control for these features in their applications of more general organizational theory. Moskos (1970) and Janowitz (1971a) provide examples of the first, while an instance of the latter is a paper by Smith and Ross (1976) which attempts to apply Blau's (1970) "size axiom" to the American military in Vietnam while controlling for the rational and irrational aspects of military organization. The present study will, however, pursue the former strategy, employing variables that are explicitly organizational in nature but at the same time are strictly applicable only to military institutions. At least at this elementary stage in the study of military institutions, it



may prove wise to keep in mind the counsel of Carl von Clausewitz (1968:254) that

War is a special business, and however general its relation may be, and even if all the male population of a country capable of bearing arms, exercise this calling, still it always continues to be different and separate from the other pursuits which occupy the life of man.

According to James Thompson (1967), there are two major schools in the sociology of organizations, which he labels the closed and open systems approaches. The first assumes that the rational processes of an organization's inner workings are to a certain extent protected from the interference of social forces external to the formal organization. This assumption allows the social theorist to seek out the rules which govern structural relations within organizations. The deductive theory of organizations proposed by Blau (1970) and Blau and Schoenherr (1971) is a statement of such rules. Informal structure and the environment are considered important sources of variation in the second approach which is the one more frequently taken in studying the military.<sup>1</sup> Shils and Janowitz (1948), Little (1964), and Helmer (1974) are among those who have shown the crucial effect of informal structure on the formal organization of military institutions; whereas the organizational implications of the position of an armed force in the political structure of its parent state is emphasized by Stinchcombe (1965) and Janowitz (1970).

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<sup>1</sup>Not only are such models more easily proposed than constructed but they are often "hopelessly underidentified" (Duncan, 1975:89).

The closed and open systems analyses undertaken in Chapter IV should be regarded as heuristic exercises which are merely prefatory to the construction of the more complex models required to accurately describe the processes of change in military institutions over time. What may be necessary is the kind of model described by Kourvetaris and Dobratz (1976) in which the environment and social-historical factors are allowed to affect the organization, the relationship of the structural variables within the organization, and the effect of the organization on the environment.

#### Methodological Considerations

Two problems beset this kind of project from the beginning. The first is the difficulty of conducting cross-national research. Fallers (1968) notes that at no time do the contradictions between the universal and relative conceptions of human behavior become so manifest as in the comparative study of societies. Yet from antiquity to the birth of sociology in the minds of thinkers such as Weber, Marx, Tocqueville, and Durkheim, there has been a lust to discover those common factors which underlie the totality of human activities and institutions regardless of national orientation. As testimony to the survival of this intellectual tradition, there exists a number of comparative endeavors from the contemporary generation of social scientists such as Dahrendorf (1959), Moore (1966), and Lipset (1964). While there has been a special effort to analyze the patterns of

modernization in the developing nations (Shils, 1962; Geertz, 1963; Janowitz, 1964), there is a tendency to decry as inadequate any existing comparative sociology of the advanced societies (Giddens, 1976). While the tradition merits further attempts, a widespread agreement on its mixed results and pitfalls (Janowitz, 1970:5-35) dictates the most careful methodological approach.

No less imposing is the other source of conceptual difficulty, which is the problem of studying processes of change over time. While the solutions to this problem are more straightforward, these solutions have only recently been adopted by sociologists. The seminal work was done by Coleman (1964a, 1964b, 1968), and substantive applications have now begun to follow. Several of these applications have, however, been in the area of the sociology of organizations and have thus served as relevant examples for the present work (Freeman and Hannan, 1975; Meyer, 1975a, 1975b; Hummon, Doreian, and Tenter, 1975; Smith and Ross, 1975). Still there remain enough outstanding refinements of a mathematical nature to limit this thesis to only the simplest applications of time-series techniques (Kaufman, 1976). Hence, the problematic nature of cross-national comparison combined with the difficulties of analyzing social change must be borne in mind throughout this endeavor.

### Hypotheses

The path from macrosociological theory to empirically



testable hypotheses can be a hazardous one. For this reason, this research will employ a two stage process of hypothesis formation. First, from the multiplicity of writings on the mass armed force, a set of conceptual hypotheses on the organizational structure of the mass armed force and its decline will be selected. Only in the process of the case study of the United States in Chapter II will an effort be made to operationalize the conceptual variables which compose this initial set of hypotheses.

From van Doorn's (1975a) incipient formulation, it can be hypothesized that a decline in the mass armed force will be marked by a decrease in total personnel strength, a reduced mobilization of the populace, and a greater division of labor in the armed force of a developed nation. The rendition of the first aspect of van Doorn's definition into an empirically testable hypothesis is straightforward and non-problematic.

Hypothesis 1. At some point in time, the armed force of a developed nation will undergo a substantial decline in total personnel.

The degree of military mobilization in a society is a function of the personnel strength of the armed forces and the size of the total population. Historically the practice of warfare has been, for the most part, limited to the males in a society.<sup>1</sup> Since this is true for the countries in this

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<sup>1</sup>In some developed nations, females are still barred from military service. Such is the case for the Federal Republic of Germany which is included in the present study (Fleckenstein, 1975).

study, the mobilization of males is considered apart from the mobilization of females. Whenever military mobilization is mentioned without a specification of gender, it is the level of male mobilization to which this work refers. With this qualification, a second hypothesis can be stated.

Hypothesis 2. At some point in time, the degree of mobilization in a developed nation will substantially decline.

The homogeneity of an armed force is a more difficult concept with which to deal. What van Doorn implies in his use of the word is a steady differentiation of the elements which compose an armed force. At the level of the individual soldier, the mass armed force in its classical sense is composed of very large numbers of functionally identical infantrymen. These infantrymen serve as components of functionally identical platoons which are themselves components of functionally identical companies, battalions, and even functionally identical regiments and corps. Even prior to the rise of the Napoleonic armies, this structural homogeneity had begun to undergo some change, albeit only in the more specialized units such as the artillery and the engineers.

Several criteria can be selected as being indicative of this division of labor in an armed force, but the data availability and comparability of most, such as the number of branches and sub-branches in a force or the number of military occupational specialties in a force's personnel system, are unsatisfactory for a comparative analysis. One criteria of the division of labor, which is applicable to

all the armed forces examined in this study and which has been the subject of previous work, is the distribution of personnel of a well-defined hierarchy of ranks. Lang (1964) and Janowitz and Little (1965) note that the pyramidal rank structure of the early mass armed forces have given way to a more "flask-shaped" rank structure in modern military institutions.<sup>1</sup> From this observation, a third hypothesis can be derived.

Hypothesis 3. Over time, the homogeneity of a developed nation's armed force as exemplified by a pyramidal rank structure will be altered so as to facilitate more modern heterogeneous forms of organization.

In addition to the three hypotheses generated by van Doorn's formulation, there are a number of other structural transformations which have been associated with the modernization of military institutions and the decline of the mass armed force. Goldman (1973a, 1973b) has noted the increased utilization of women in contemporary armed forces. Janowitz (1973) and van Doorn (1975a) have called attention to the proportional decline of the ground force with respect to the relative growth of more technologically-oriented air and sea forces, and a complex hypothesis on the civilianization of the military in the last three decades has been elaborated by Janowitz (1971). From this body of work, three additional hypotheses emerge.

Hypothesis 4. The utilization of women in the armed force of a developed nation will increase over time.

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<sup>1</sup>This metaphorical explication of the rank structure is examined in detail in Chapter II.



Hypothesis 5. The concentration of personnel in the ground force of an armed force will, over time, shift to the more technologically based branches of service.

Hypothesis 6. The armed forces in a developed nation undergo a process of civilianization over time.

It should be pointed out that hypotheses 1 and 2 postulate the reversal of a pre-existing trend while the four additional hypotheses assume a more continuous process of change. Although these hypothesized differences in the course of change for the separate phenomena make the transition to a higher level of theoretical generalization considerably more difficult, it is the intent of this research to reach for that higher level and undertake the chore of merging a set of diverse phenomena into a unified model which may capture some of the more subtle complexities in the process of organizational evolution in armed force institutions. In order to accomplish this, it becomes necessary to state two higher order propositions which will also be examined in this investigation.

Proposition I. The phenomena described in the above hypotheses can be regarded as separate aspects of the same historical process--the decline of the mass armed force.

Proposition II. The decline of the mass armed force is a multi-national phenomenon applicable to developed nations with parliamentary regimes.

The thesis is divided into five chapters, the first of which has described the theoretical problem and laid out a research design. Next, a case study of the organizational changes in the armed forces of the United States during the twentieth century provides the setting for an operationalization

of the theoretical constructs presented in this chapter, so that Chapter II may close with a restatement of the hypotheses in testable form. The applicability of the hypotheses to six developed nations is tested through the methods of comparative analysis in Chapter III. The process of moving from a macro-sociological model expressed in terms of ideal types to a more formal integrated model of organizational change is begun in Chapter IV, while the concluding chapter suggests the steps necessary to continue this more long range project and reformulates the existing ideal type model of military change in light of the findings of the present work.

CHAPTER II  
A CASE STUDY OF THE ORGANIZATION OF THE  
UNITED STATES ARMED FORCES IN THE  
TWENTIETH CENTURY

At the end of the previous chapter, six hypotheses were presented as components of the general theory on the decline of the mass armed force. Five of these hypotheses are not yet expressed in forms which lend themselves to empirical test. The present chapter will have a twofold purpose--a case study of the organizational structure of the United States armed forces in the twentieth century and the selection of a set of organizational variables which can be used to translate the hypotheses of Chapter I into statements which can be empirically tested.

The chapter is divided into four sections, the first three of which are derived from van Doorn's three dimensions of the mass armed force--size, mobilization, and homogeneity. Due to the conceptual consanguinity of two measures, the male and female military participation ratios, the mobilization of women and their utilization in the armed forces will be covered in the section on mobilization. The fourth section will deal with the decline of the ground force and employment of civilian personnel.



### Trends in Size

Jacques van Doorn (1975a) has defined the mass armed force according to three organizational dimensions which are each derived from a meaning of the word "mass." The first considers the variable of size. The huge size, usually a half million or more men, was the most striking characteristic of the early mass armies. Hence, the first hypothesis to be examined concerns the over-time changes in the size of armed forces.

A report by the Advisory Panel on Comparative Military Institutions of the Inter-University Seminar on Armed Forces and Society (1975) suggests that "Over time the armed forces of a modern industrial nation will cease to increase in absolute size. The point at which growth ceases will coincide with the end of conscription." Concealed within this hypothesis is the unstated assumption that the military institution of a nation operating under a mass armed force model will undergo a continuous and steady increase in absolute size. Therefore the researcher should first find in the data this growth trend; he should then search for the point which marks the conversion to the all-volunteer model and its correlative manpower decline during the periods of adjustment to new mission requirements. In order to accomplish this, it is necessary to look at the absolute size of armed forces in the United States from 1900 to 1974. It is important to bear in mind the significance

of war involvement and the so called "ratchet"-effect.<sup>1</sup> During wartime, under the mass armed force model, it is expected that the size of the military will increase phenomenally. With the demobilization of post-war periods, a substantial decrease can be expected. The ratchet-effect hypothesis maintains that the decline in any post-war period is never so great as to place force levels in a position comparable to the pre-mobilization status.

A cursory glance at Figure 1 establishes justification for the ratchet-effect theory. What is not visible in the graph is evidence that there could exist internal bureaucratic pressures which may create any substantial tendency for peacetime growth. In particular, stability is evident in the pre-World War I and inter-World War II periods. If the graph is divided into two sections, with World War II as the division point, certain interesting trends do become apparent. Until World War II the comparatively small size of the armed forces is noteworthy. Peacetime militaries are consistently small with mass mobilization occurring only for war. Following World War II trends become markedly different. This is the period when both Samuel Huntington (1957) and Morris Janowitz (1971) assert that military elites became important in policy-making arenas and this is the period Harries-Jenkins (1975) points out as exemplifying the mass armed force in the United States. Only more detailed analysis can reveal whether the

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<sup>1</sup>Bruce Russett (1972) describes the ratchet-effect in a military institution as its inability to return to pre-war size following wartime mobilization.

U.S. armed forces during this post-World War II period do in fact constitute an approximation of the mass armed force model on other criteria in addition to size.

There is however, one more important detail. The size hypothesis suggested by the Advisory Panel requires that an armed force cease to increase in absolute size with the end of conscription. Though only a very brief time has elapsed since the U.S. eliminated conscription in 1972, and though a post-Indochina War decline should have been expected in any case, it is perhaps very significant that the ratchet-effect did not operate in the new period. For the first time in the modern history of the United States, post-war troop levels have decreased below the pre-war peacetime level. Since the ratchet-effect has been, more than any other factor, responsible for previous increases in the size of the U.S. armed forces, its inoperability following the Second Indochina War is indicative of substantial institutional transformation.

Another hypothesis with which the Advisory Panel has been concerned is that "intermittent fluctuations in the absolute size of armed forces decline over time in the twentieth century." This hypothesis reflects a more specific requirement for the size of a mass armed force. If this hypothesis holds true, the observer would expect the mass armed force model to demonstrate a greater instability in absolute size than armed force models which rely more on volunteers. Figure 2 represents in a rather crude form the fluctuations of the U.S. armed forces during the twentieth century. Even with this



graph, it becomes clear that the fluctuation hypothesis in its current form does not apply to the case of the United States.

Table 2 provides a more convenient method of visualizing the degree of fluctuation in the size of the U.S. armed forces over different five-year periods. The numbers in the second column are the sum of the absolute values of percentage change in size over each five year period.<sup>1</sup> This measure provides an indicator by which the amount of size fluctuation over different time periods can be compared.

Though Table 2 also shows the general inapplicability of the Panel's hypothesis to the U.S. case, some interesting phenomena can be observed. As could be expected, those five year intervals in which the country was at war or recovering from war are marked by the greatest amount of fluctuation in size. Despite the fact that there is some distortion as a result of the compounding effect of increases over successive years, it is possible to see that the periods of 1926-1930 and 1931-1935 were times of incredible stability in force size, while 1901-1905, 1906-1910, and 1911 to 1915 were comparatively less stable. To a certain extent, this measure of fluctuation can be used to discern the elimination of a kind

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<sup>1</sup>If "p" equals the positive or negative percentage increase in size of year "i" over year "i-1", the relative fluctuation in armed forces size over a five-year period from year "i" to year "i + 4" is

$$\sum_{k=i}^{i+4} p_k .$$

of "jerkiness" from the operation of the institutional mechanism. An increased "smoothness" in the operation of the institutional mechanisms can be inferred by concentrating on the degree of fluctuation associated with the four twentieth century wars. The World War II (1941-1945) era's 574.1 is considerably less than the World War I (1916-1920) period's 742.2, despite the reality that the former war's total mobilization was considerably smaller. It is the Korean Conflict (1951-1955) period's comparatively lower degree of fluctuation which more clearly hints that decisive institutional change has taken place since the World War I mobilization, and the size fluctuations related to the Second Indochina War (1966-1970) period are negligible when compared to those of previous wars.

From this examination of the American case, it is possible to suggest a modified version of the fluctuation hypothesis. The fluctuations in the absolute size of modern armed forces necessary for the transition from a peacetime to a wartime institution become less erratic over time. From the data just examined, it is possible to assert that this hypothesis holds for the United States.

#### Trends in Mobilization and Participation

Another of van Doorn's (1975) three dimensions of the mass armed force is the degree of mass mobilization of the populace which is determined necessary for the maintenance of the armed force. By his definition, a mass armed force

requires a greater mobilization of the citizenry than either the feudal model force which preceded it or the all-volunteer models which succeed it.

A useful measure of the degree of citizen mobilization which is provided by Stanislaw Andrzejewski (1954:33-39) is the military participation ratio (MPR). The MPR is simply "the proportion of militarily-utilized individuals in the total population," but Harries-Jenkins (1975), following Andrzejewski's (1954:73-74) suggestion, breaks this total MPR into separate MPR's for the males and females in a society. Though Andrzejewski is concerned with the relationship between MPR and other macrosocial phenomena, the MPR will only be employed at this time as an indicator of the degree of mobilization.<sup>1</sup>

Harries-Jenkins (1975) states, as an hypothesis in his analysis of the decline of the mass armed force in Great Britain, that "Over time, the military participation ratio in countries with all-volunteer forces will decline."

Since conscription has departed so recently from the American military scene, this hypothesis, in its present form, places considerable constraint on this analysis. From what has been observed so far in this paper, a consistently low MPR would be expected for the U.S., except for wartime, up until the post-World War II period when the U.S. armed forces began

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<sup>1</sup>Andrzejewski also makes a distinction between the actual MPR and the optimum MPR. For this purely empirical analysis, I will use only the actual MPR, though I will make one observation concerning the optimum MPR. See the next note.



to take on the size characteristics of a mass armed force model. An overall examination of changes in the U.S. MPR should, however, provide a broad range of insights into the institutional dynamics of this country's military. Table 3 contains the MPR as computed yearly from 1900 to the present for the American male population and Figure 3 presents this material graphically. With the exception of a World War I hump, the pre-World War II period is described by a relatively stable, perhaps slightly increasing MPR over time. A qualitative distinction is observable between the pre-World War II and post-World War II MPR's for this country. Slight, undramatic peaks for the Korean Conflict and Second Indochina War notwithstanding, there are markedly mass armed force model characteristics with respect to mobilization in evidence in the post-World War II American military establishment. The real-world manifestation of these trends in MPR is a large standing military which is, with a minimum of subsequent mobilization, capable of engaging in limited conventional warfare.

There is, however, in the wake of the clearcut 1969 policy decisions to move toward an all-volunteer force a new trend of which a declining MPR is characteristic. At what rate and to what degree this reduction process will continue is a subject of speculation beyond the scope of this discussion.<sup>1</sup>

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<sup>1</sup>Though it seems virtually impossible to speculate on how low an MPR for the U.S. might fall, there is in this data some clues for estimating a maximum MPR. (This maximum MPR constitutes what Andrzejewski in a poor choice of words calls the "optimum" MPR.) The MPR in 1944 soars to above 16% of the male

The Advisory Panel has not limited its analysis of the military and the civilian sectors to observations on the relationship between the size of the armed forces with respect to the total population. It has been equally concerned with the size of the armed forces as a proportion of the adult working population. On this matter, the Advisory Panel's initial research proposal hypothesizes that this proportion will decline over time in a modern industrialized nation. Table 3 presents these computations for the United States for every fifth year from 1929 to the present. If the devotion of a large proportion of the working population to military service can be assumed to be indicative of a high degree of mobilization and consequently representative of the mass armed forces model, the material contained in Table 4 supports what we have already observed with respect to MPR. This is that with respect to degree of mobilization the U.S. armed forces do not fit the mass model until the post-World War II period. Even very recent declines following the Second Indochina War are still far from approaching the low pre-World War II degree of mobilization.

Only comparatively recently have social scientists become aware of the importance of the changing role of women with respect to military institutions. Nancy Goldman (1973) has suggested that the percentage of women in the armed forces,

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population at which point it begins to level off. Despite previous World War II years producing huge increases in the size of the armed forces, 1945 is marked by only a 5% increase. It may be assumed that mobilization was approaching its social, political, and economic limitations.

subject to a number of limiting factors, should increase in an American all-volunteer force. From the work of Goldman and Harries-Jenkins (1975), a relatively complex process can be imagined. At some point in the modernization of an industrial nation, women will be incorporated into the armed forces resulting in an increase over time in both the percentage of women in the military and female military participation ratio. Eventually the percentage of women and the female MPR will stabilize. If the armed forces should convert from a mass model to an all-volunteer model, the percent of women will increase but the female MPR may remain relatively unchanged.

The reasoning behind this hypothesis runs thusly: the initial utilization of women in the armed forces can be viewed as the result of several historical phenomena. First, it can be considered as the inevitable outcome of expanding the various rights of citizenry to another underprivileged sector of the population.<sup>1</sup> As women gain political, educational, and economic opportunities comparable to those of men, it is not surprising that they should be drawn into military service by the same conditions which motivate males in parallel life situations. Some women will pursue military service for its traditional function of achieving full citizenship rights, though shifts in the normative structure of modern industrialized nations have considerably weakened

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<sup>1</sup>For description of the expanding franchise concept as it is discussed here, see T. H. Marshall (1950).



this tradition (Janowitz, 1975). Another approach to this issue emphasizes the importance of wartime personnel shortages which require the utilization of females and undermines grounds for any subsequent restriction of women from service. More important, however, are the economic and educational advantages associated with military service which are perhaps just as appealing to the young woman striving to assert her individuality and personal independence as they are to the male in similar circumstances.

Since women in the industrialized nations have not been subject to conscription, the percentage of the total female population participating in the armed forces tends to stabilize rather quickly. If the overall size of the armed forces is likewise stabilized, the percentage of all female military personnel will remain constant. If, however, there is a substantial reduction in the overall size of the armed forces as a result of an end of conscription, the percentage of females in the armed forces may increase, while there is still little change in the number of females actually serving. The effect of ending conscription can, therefore, be a rise in the percentage of women in the armed forces with no comparable rise in the female MPR.

The findings from the U.S. data presented in Table 5 and Figure 4 only partially demonstrate the viability of this hypothesis. For the United States, there is indeed a relatively significant increase in the female MPR in recent years. Two separate sets of factors are probably producing this

effect. First, there are, as Goldman notes, shortages in personnel created by the end of conscription, and it is very efficient for such shortages to be overcome by an increased reliance on female personnel. Additionally, however, there has been a major social movement in American society during the last few years toward a more egalitarian social role for women. As with racial integration, the military has set the example for civilian society in incorporating women into its ranks. For this reason, an increase in the female MPR might have been occurring at the present time, even without the termination of conscription.

#### Trends in Rank Structure

The third major characteristic of a mass armed force as defined by van Doorn (1975) is a pervasive homogeneity. This "uniformity of skills and behavior" is especially manifested by the distribution of personnel throughout the various hierarchical ranks. Just as much information can be discerned about the functional attributes of a living organism from an examination of its skeletal dimensions, so can considerable information about the bureaucratic processes of a military institution be estimated from the shape of its rank structure. From the Roman legions and Spanish tertios to the units of the first great mass armies of the Napoleonic era, military efficiency was dependent on a pyramid-shaped rank structure. Command and control flowed outward and downward from the will of a single strategic decision-maker. In a system which

relies on the coordinated behavior of a multitude of individuals performing a similar task requiring a minimum of skill, the only function of the intermediate links in the chain of command is to orchestrate the actions of the army.

The rank structure of the mass army, in the classic case, actually consists of two pyramids placed one on top of the other. The larger and lower of these two pyramids rests on a broad base composed of the lowest enlisted ranks. Above this base, the size of each succeeding echelon dwindles rapidly, the lack of necessity for large numbers of corporals and the rigors of enlisted life in more primitive armed forces taking their toll in departures from service and death. Under mass armed force conditions only a small proportion of all enlisted personnel rise to the rank of non-commissioned officer and even fewer move on to the highest non-commissioned ranks.

The counterpart of the lowest enlisted ranks in the smaller officer pyramid is the junior officer. As is the case with the unskilled rifleman, the junior officer, as an individual, can be and often is a dispensible component of the mass armed force, and, under the mass armed force model, each higher level of the officer rank structure is inhabited by a smaller population. Whether the regulating mechanism is the spiralling prices of the purchase system or the increasing competitiveness of growing professional expertise, the necessity of command centralization insures the steep



peaks of high officer ranks within the mass armed forces model.

From its conception, however, the mass armed force has contained within itself the organizational formats which would eventually replace it. The mass armies of republican and Napoleonic France relied heavily on their modernized artillery, a branch of service where the essential nature of technological ability and experience resulted in a decidedly different form of rank structure. It was the soldier of the middle rank, the military cousin of the petite bourgeoisie craftsman, who constituted the mainstay of the early artillery corps. The officer equivalent of the organizational revolution, however, had its inception in the Prussian military. The collective decision-making procedures of the Prussian general staff with its emphasis on a division of labor in the strategic planning process brought a new importance as well as a number of important managerial functions to the middle-level officer ranks.

So it is that the decline of the mass armed force is marked by a fundamental alteration of the rank structure. The pyramidal structure gives way to a more flask-shaped distribution of personnel throughout the ranks (Lang, 1964; Janowitz and Little, 1965). Perhaps the best way to illustrate the pyramid- and flask-shaped rank structures is with two extreme examples from the American data. In Figure 5, the rank structure of the U.S. Air Force in 1974 is superimposed on the rank structure of the U.S. Army in 1900. The former

component, represented by the broken line, is one of the most specialized, technologically advanced, and heterogeneous military organizations in the world, while the latter component constitutes an example of a bottom heavy, unspecialized, and homogeneous military institution. For the purposes of clear presentation, the officer data is exhibited on an enlarged scale. The true proportions of the officer and enlisted portions of the graph can be inferred from the percentages of the whole constituted by each rank, which are also included in Figure 5.

Very noticeable in the comparison of the two extreme cases shown in Figure 5 is the different proportion of total personnel who are commissioned officers in each component. In 1900, only 3.4 percent of Army personnel were in the officer corps. For the 1974 Air Force, the comparable computation is 17.4 percent, a difference of over four hundred percent. In the 1974 Army, the officer corps constituted 11.9 percent of all personnel, an increase of almost 250 percent over the 1900 figure. For this reason, it is possible to consider the hypothesis that modernization brings not only a growth in the middle ranks among both officers and enlisted personnel, but also an overall increase in the size of the officer corps with respect to the institution as a whole. This trend can be assumed to be indicative of two phenomena-- the transference of mission performance functions from enlisted personnel to the officer corps and the collectivization of decision-making within the officer corps itself. The former

phenomenon is particularly characteristic of the Air Force where officers perform crucial combat functions while the latter is derivative of the normal bureaucratization and rationalization of the military as an institution undergoing modernization.

In order to make a point on the differences in rank structures, extreme cases have been employed in Figure 5. As has already been mentioned, the technological development of an armed force appears to be a crucial determinant of its rank structure. It is, therefore, no coincidence that there exists so marked a degree of rank structure variation between a modern Air Force and a pre-World War I Army. As Figure 6 illustrates, the differences between the 1974 Air Force and the 1974 Army are not nearly so pronounced. Still, the differences in distribution of personnel are significant enough to warrant treating each branch separately. This is particularly justified due to considerable differences in the technological orientation of the branches of service during specific historical periods.

Bar graphs are satisfactory tools for comparing the shape of a rank structure at one historical instant with another rank structure at the same or at a different instant in time. Such graphs can be inadequate for analyzing long-term trends in institutional change. For this purpose, other types of measures will be examined: the proportion of personnel in any single rank over time, the percent of a specific branch of service which is classified as the officer



corps, and an estimate of the mean rank for a total service, officer corps, or enlisted force.

The first of these measures, changes in the percent of individuals in a specific rank or category of ranks over time, is straightforward for presentation but due to its myopic focus rather jejune from the perspective of meaningful analysis. Figures 7, 8, and 9 picture changes in the major components of the rank structures for each of the four branches of service on the available data from 1900 to the present.

For the times shown, there is a definite similarity and continuity in the proportion of general officers in each service. The Air Force has markedly larger proportions of both company and field grade officers with a relatively constant increase in the number of field grade officers over time. This finding may prove to be an artifact of the overall larger proportion of officers in the Air Force. The most interesting result which emerges from this broad overview of changes in the rank structure over time is the lack of major shifts in the rank structure of the officer corps during the twentieth century. In the case of the United States, it is therefore quite possible that the collectivization of decision-making and resultant reshaping of the rank structure in the officer corps of all four services occurred prior to the beginning of the twentieth century. The less appealing alternative hypothesis is that the officer corps has not undergone any major organizational revolution at all.

Table 9 shows that the major arena of organizational change in the rank structure of the U.S. military establishment has been at the enlisted level. Over time there has been a concomitant rise in the proportion of non-commissioned officers and a decrease in the proportion of personnel in the lower enlisted ranks for the Army and Air Force. Only the Navy displays a premature possession of the enlisted rank structure equilibrium, toward which the other services seem to be moving, coupled with a consistent stability over time. Though the Marines initially follow the trends set by the Army and Air Force, there is a sharp break with prevailing forms between 1950 and 1955. Thereafter the modernization trends of the other services are emulated at a retarded pace.

More specific patterns of change can be ascertained by looking at the proportions of personnel in one rank category of a service over time. Given the kind of changes that we have hypothesized in the rank structure, there are only four basic kinds of graphs which we should expect to find for a given rank over time. These four are shown in Figure 10. Line A represents a "stable" rank. This is rank for which the proportion of personnel in a branch of service remains the same over time. Ranks for which the proportion of personnel has been either steadily increasing or declining over time can be characterized by lines B or C respectively. A more interesting condition for change in a particular rank is that represented in line D. Such a "transition" rank undergoes first an increase and then a decrease in size

followed by a leveling off of its proportion of the total. The "hump" in such a transition rank demarcates the period of transition between one stable rank structure and another. In a period where a rank structure is changing from a pyramid shape to a flask shape, we can expect the second or third rank from the bottom to display a type D or transition line. At the same time, the lowest rank and certain higher and intermediate ranks will display type C and B lines respectively.

Table 11 employs the ideal types suggested in Figure 10 to classify the ranks of each branch of service for the U.S. armed forces. From such a cataloguing process emerges a very distinct picture of the rank structure evolution as it has occurred within each service. Ranks have been initially assigned to ideal types according to the information contained in Tables 6 through 9. The calculations presented in these tables have been obtained by treating the proportion of total personnel in a particular rank as the dependent variable in a univariate regression with time. The R's are Pearson correlation coefficients for the specific rank proportion and time, while the slopes constitute the slope of a straight line fitted to the data by the "ordinary least squares" technique. An asterisk beside a figure in the "R" column designates a correlation coefficient which is not significant at the .001 level of statistical significance. For a rank to be assumed to be either increasing or decreasing as a proportion of the total force over time, its correlation



coefficient has to be significantly greater than zero at the .001 level. So it is that the highest enlisted rank for the Army (E-9) with its significant positive correlation of .887 in Table 6 is placed in the increasing category in Chart 1 and the lowest enlisted rank for the Army (E-1) with its significant correlation of  $-.920$  in Table 6 is considered to be decreasing over time. A nonsignificant correlation requires an examination of its scattergram before it can be assigned to one of the remaining classifications of being either a stable or a transition rank.

In Table 11, six ranks have been regarded as being transition ranks, two for the Army, two for the Navy, three for the Air Force, and one for the Marine Corps. To see why these ranks are so assigned, the reader should refer to the appropriate scattergrams which are included in the appendix to this paper. Figure 9 shows the graph of a curvilinear function which would approximate the changes in the proportion of Army personnel who were of rank private E-2 from 1900 to 1974.<sup>1</sup> From Table 10 it is possible to see that the nonsignificant correlation coefficient of .092 can be broken into two significant trends, one prior to 1945 and one from 1945 to 1974. This technique, which is a

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<sup>1</sup>A discussion of statistical techniques for dealing with curvilinear relationships is found in Arthur L. Stinchcombe, "On Curvilinearity in Regression Involving Age and Social Status: A New Approach to Cohort Analysis and to Social Mobility Studies," Working Paper, National Opinion Research Center, February, 1976.

modified version of spline regression,<sup>1</sup> also allows us to more precisely analyze the process of institutional variation for the proportion of Army Private First Class (E-3), Air Force Air Man First Class (E-3), and Marine Corps Lance Corporal (E-3). The decidedly "hump-shaped" nature of the process of change in the former of these three ranks is evident from Table 10. Marine Corps Lance Corporal, however, turns out to be more correctly regarded as a stable rank.

The trends in rank proportion variation just described constitute a comparatively simple pattern when contrasted with the pattern of change found in Air Force Sergeant (E-4) and Master Sergeant (E-7) and Air Force Second Lieutenant (E-1) ranks. A curvilinear function necessary to describe the variation of the relative size of these ranks over time is shown in Figure 10. Such a pattern of change could be fractured into a number of the smaller transition "humps" examined in the foregoing discussion, but a more sophisticated approach would involve examining the total set of changes for some all-encompassing pattern. It is highly possible for example that these processes of fluctuation can be described by some form of damped sine function.<sup>2</sup> All that is required

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<sup>1</sup>Fred L. Bookstein, "On a Form of Piecewise Linear Regression," *The American Statistician* 29 (August 1975):116-117, contains an introduction to and justification for this approach to analyzing curvilinearity.

<sup>2</sup>A damped sine oscillation is a composite function consisting of the product of a sine function (a symmetrical oscillation function) and a decreasing logarithmic function of the general nature  $y = F(t) \sin 2 g(t)$ . The result is an oscillation which decreases in intensity over time. An

for the present discussion, however, is an observation that the three ranks in question manifest fluctuations which decline in intensity over time.

A considerable amount of information is summarized in Table 11. It is immediately apparent that on a rank-by-rank basis the Air Force and the Army rank structures have been the most subject to change during the period under consideration, while the rank structures of the Navy and Marine Corps have remained more stable. The rapidity and degree of increase is, however, considerably greater for the Air Force ranks than for those of the Army; and though the Navy and Marine Corps both display a tendency for stability, a glance at Figures 7 through 9 shows that the two branches of the service are stable at opposite extremes of the rank structure paradigm. For the first year in which data is available, the Navy has a flask-shaped rank structure, and as Figure 11 and Table 11 show the only difference between the Navy of 1930 and the Navy of 1974 is a slight expansion of the higher enlisted and officer ranks and a steady decline in the next to the lowest rank. The Marine Corps, on the other hand, has demonstrated only a minimum tendency toward growth in the upper officer and enlisted ranks. Despite the fact that the next-to-the-lowest rank has undergone substantial shrinkage over time, the Marine Corps remains the most bottom heavy of the services.

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application of such a model to institutional data could prove quite fruitful, and I am grateful to Amy Ong Tsui for assistance in clarifying the concept.



A second measure for gauging the degree of modernization in an armed force or a branch of service is the proportion of the total service which is classified as officers. Two phenomena are suggested as being responsible for increases in the proportion of officers--the collectivization of the decision-making process and the assignment of fundamental combat tasks to officers. Table 13 shows the percentage of officers in each branch of service from 1900 to 1973.

The proportion of officers goes down for all branches as a result of the buildup prior to and during World War II, but ignoring wartime fluctuations clearcut trends emerge for each of the services. For the Army, the percentage of officers makes its most significant transition at the end of World War I. From this point forward there is only a gradual increase to the present. The proportion of officers in the Navy is marked by an interesting slump during the first two decades of the century. Its gradual increases following World War I and its relative stability reemphasize the comparatively static nature of the naval rank structure in the twentieth century. At its creation, the percentage of officers in the Air Force is substantially high, but its increase over time has been the most consistent and rapid of the four services. This is undoubtedly a result of the very high degree of technological development and the importance of officers in aerial combat. Not surprisingly a different pattern dominates the growth of the officer corps in the Marine Corps. Devoid of rapid fluctuations, the proportion of officers in the

Marine Corps increases gradually but consistently over the period under consideration.

The third suggested indicator for measuring change in the rank structure of a military institution over time entails the estimation of the center of gravity for the type of bar graphs with which the "shape-of-the-rank structure" was conceptualized at the beginning of this section. For calculation purposes, it is important to here make explicit an assumption which is implicit in the graphic representation. Each rank is assumed to lie on a vertical scale with an equal distance on the scale allotted for each rank. In order to determine a "mean rank" for a particular service, the lowest enlisted rank is assigned the value of 1, the next lowest 2, and so on until the highest officer rank is assigned a 19.<sup>1</sup> The number of men in each rank is then multiplied by the appropriate number for that rank and the sum of the products is divided by the total number of personnel in the service. The mean rank for a branch of service or a corps provides a relative indicator of the center of mass with respect to rank for a given corps.

In Table 14, mean ranks for each branch of service are shown for every fifth year from 1905 to 1974. It is interesting to note that the mean ranks display patterns of change for each service which are similar to those revealed by the other measures of heterogeneity used in this section. In the Army, there is the same rise in degree of heterogeneity

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<sup>1</sup>Warrant officers are excluded from these computations.

over time. Stability is still the central characteristic of the Navy's rank structure, though its mean rank is always higher in a given year than that of the Army or the Marines. The most rapid increase in the degree of heterogeneity, as demonstrated by movement away from the pyramid rank structure, occurs in the brief history of the Air Force. Here again the Marines are shown to be the most reticent to abandon the pyramidal rank structure, suffering a particular lag in rank structure development during the mid-fifties. A separate calculation of the mean rank for officer and enlisted personnel, as presented in Table 15 and Table 16, shows that these observed patterns of change have applied to officer as well as enlisted rank structure.

Several ways of measuring alterations in the rank structure of military institutions have been applied to the American data in this section. The first set of approaches which examine changes in the proportion of personnel in a given grade or rank over time or which measure the relative size of the officer corps of a service require no complex assumptions and produce rather straightforward results. On the other hand, calculating a mean rank for a service or a corps requires certain assumptions more easily justifiable for a graph of the rank structure than for the rank structure itself. Still all three types of measure reveal similar patterns of change when applied to a particular branch of service. In the twentieth century, the Army undergoes a steady movement away from the pyramidal, homogeneous rank



which is theoretically associated with the mass armed force. Stability of rank structure most clearly differentiates the Navy, but the Navy begins the century with a heterogeneous rank structure such as those usually hypothesized for militaries which are heavily reliant on technological development. The Air Force, also, is born with a modernized rank structure, but demonstrates very rapid movement towards a form which can be associated with an even higher degree of heterogeneity. With respect to rank structure, the Marine Corps remains an anachronism trailing the structural changes of the Army.

#### Decline in the Ground Force and the Process of Civilianization

Though the decline of the mass armed force has received the central emphasis in contemporary theories of military change, a number of other modernization phenomena are given weight in the literature and are frequently discussed in conjunction with the decline of the mass army. In this section, two of these trends--decline of the land force and civilianization--will be examined within the contest of the American data.

In his discussion of the decline of the mass armed force, van Doorn (1975) concentrates on the land force. "Reduction of the armed forces," he argues, "is always to the detriment of the army." Harries-Jenkins (1975) begins with the hypothesis that the decline of the mass armed force will result

in a more substantial decrease in size for the Army than for the other branches of the service, but he finds that the British Army, probably as a result of the Northern Ireland conflict, has not decreased as much as predicted. This result brings to mind Janowitz's (1971) theory of two post-World War II counteractive trends in strategic military thinking. To what degree the philosophy of total war has led to a suppression of the size of the land forces with respect to the more technologically developed air and naval forces will be difficult to discern, since the importance of the land forces will have been increased to some degree as a result of emphasis on the strategy of limited war.

Table 17 presents the percentage of total armed forces personnel in each branch of service for every fifth year. As can be seen, the proportion of personnel in the Army declines from the beginning of this century until the post-World War II period when it seems to level off around thirty-five or forty percent. In the first third of the century the Navy attains its highest proportion of personnel, but declines in relative size following World War II. The Air Force personnel size with its tight link to technological factors demonstrates the proportional stability which is characteristic of the Army and Navy in the modern era. A more curious pattern of proportionality is characteristic of the Marines. Over the last three decades a steady rise in the proportion of Marines among total personnel is probably indicative of the increased focus on limited military actions

as an alternative to more long-term involvements. This kind of token military effort, of which the Mayaguez action is the epitome, is as well suited to the traditional mission of the Marine Corps as it is essential to retaining some degree of stability in the existing relations between the United States and the less-developed of the Third World nations.

The decline of the Army as a proportion of United States military personnel justifies the assumption that such a decline is a phenomenon associated with the modernization of military institutions. What is interesting to note is that this trend comes to a halt just as the massification of the armed forces, as indicated by the overall force size and the military participation ratio, occurs.

There are two possible causal explanations for this phenomenon. First it could be suggested that there is some bottom limit, as determined by the demands of international military contingencies, below which the proportion of personnel in the land force cannot decline. The alternative is that the massification of the armed forces after World War II served to inhibit the decline process and that with the end of conscription the Army will continue, in pre-World War II fashion, to constitute a smaller and smaller proportion of the military establishment.

Harold Lasswell (1941) raises the spectre of a completely militarized civilian society, and Samuel Huntington (1957) laments a civilianized military elite. A more empirically grounded thesis is offered by Janowitz (1972) in his comments



on the civilianization of the military. Janowitz emphasizes the convergence of skills required for military and civilian tasks and notes a resultant permeability of the borders between military and civilian institutions. Though the civilianization process is a necessary transition in the modernization of military organizations, Janowitz holds that it is a trend which will be limited at some point by the normative traditions which are associated with, and perhaps functional for, the military way of life.

One of the central features of the civilianization process is the assumption of certain military tasks by civil service employees working for the military. The extreme case is the complete integration of civilian employees into the chain of command which occurred when President Nixon replaced the commanding general of the First Field Force in Vietnam with a civil servant, John Paul Vann. One measure of the degree of civilianization which can be obtained from aggregate statistics is a military/civilian employee ratio. This statistic is very simply the number of military personnel for every one civilian employee. For example, in 1901, the United States armed forces employed 45,000 civilians. In the same year there were 112,322 military personnel on active duty. The military/civilian employee ratio for 1901 is therefore  $112,322/45,000$  or 2.798.

Table 18 contains the military/civilian employee ratios at five year intervals. Immediately one is struck by the absence of a clear pattern. Ratios seem to be higher during

major wars but beyond this changes in ratio sizes do not mesh with any obvious progression of civilianization. The ratio is higher for 1970 than for 1901, but it is substantially lower at several points between. A breakdown of changes in these ratios by branch of service, as is done in Table 19, sustains rather than resolves the puzzles which emerge from this data. It is possible, however, that marked trends might become evident through more complex analyses of the data.

### Conclusions

In the presented analysis, the changes occurring in the military institutions of the United States during the first three-quarters of the twentieth century have been examined from two major, sometimes overlapping, perspectives: the mass armed force model and institutional modernization. Within this first perspective, three facets of the mass armed force model, as described by van Doorn, have been considered. A number of variables have been derived in an attempt to measure size, degree of mobilization, and homogeneity. In addition to these measures, two other phenomena, which are generally considered conjunctively with the decline of the mass army and are more particularly associated with the modernization process in military institutions, were considered. These are the decline of the land force as a proportion of the total force and the civilianization of the military.

By examining the variables suggested herein, it is

possible to discuss to what degree the mass armed force model is applicable to the United States military in this century. For instance, we have discovered that as far as size and degree of mobilization are concerned the United States military establishment has only taken on mass characteristics in the post-World War II period. However, with respect to heterogeneity, as embodied in the rank structure of the particular services, the U.S. military has been evolving away from the homogeneous, pyramidal rank structure which has been historically associated with the mass armed force since 1900.

These findings do not necessarily mean that the mass armed force model cannot be applied to the American case. Quite the contrary; if the development of the American armed forces is considered within a historical context, the relation between actual events and the model are not at all problematic. According to Vagts (1957), the mass armed force had its origins in the strategic interactions among the great European land powers at the beginning of the nineteenth century. The geographic isolation and its relatively effortless economic and political domination of its neighbors placed the United States under no such strategic pressure prior to World War II.

As the termination of World War II, the United States military forces stood at the edge of the country's new sphere of influence. Direct border contact with possibly hostile military forces and new geographically unlimited weaponry



have, at last, placed the United States in a delicate strategic situation. America's response has been not unlike that of the early nineteenth century European nation states when faced with a similar state of affairs. Still conditions are not totally analogous. One-hundred-fifty or so years have elapsed since the first mass armed force was born. A bureaucratic revolution has transpired in the interim which has had a profound effect on the characteristics of the post-World War II mass force. Already the reconstitution of the rank structure had occurred. Comparatively, the U.S. military is larger in size and constitutes a greater mobilization of its populace than any previous military force, but institutionally and technologically, it is quite different from the mass armed force model which is associated with the nineteenth century European states. This is particularly obvious through the preceding examination of the rank structure changes and the decline of the land force in the United States military in this century.

The preceding analysis has accomplished two tasks. First, a set of quantitative variables which can be used to describe armed force models have been delineated. Second, the twentieth-century data on the United States military establishment has been examined with respect to changes in these variables. Before this set of variables can be used in a comparative analysis of the United States with other nations at similar levels of social, economic, and political development, they must be incorporated into revised versions of the hypotheses

presented in the first chapter. These restated hypotheses which are now suitable for testing, follow with numbers identical to those of their more abstract equivalents.

Hypothesis 1. At some point in time, the armed force of a developed nation will undergo a substantial decline in total personnel.

Hypothesis 2. At some point in time, the male military participation ratio of a developed nation will substantially decline.

Hypothesis 3. Over time, the rank structure of the armed force of a developed nation will be substantially altered as indicated by increases in the percentages of officers and non-commissioned officers.

Hypothesis 4a. The percentage of female personnel in the armed force of a developed nation will substantially increase over time.

Hypothesis 4b. The female military participation ratio in a developed nation will increase over time.

Hypothesis 5. The proportion of ground force personnel in a developed nation's armed force will substantially decline over time.

Hypothesis 6. The ratio of civilian to military personnel in the armed force of a developed nation will increase over time.

### CHAPTER III

#### COMPARATIVE ANALYSIS

From the case study of organizational change in the United States armed forces in Chapter II, a set of measures have been developed by which the theory of the decline of the mass armed force can be subjected to the more rigorous scrutiny of quantitative analysis. Before proceeding with the comparative analysis of the present chapter, it may prove useful to restate each of the selected organizational variables. Absolute size, of course, needs little explanation being the total number of military personnel in an armed force. The degree of mobilization in a society is defined by sex, so that the male military participation ratio (MPR) is the number of male military personnel divided by the male population and multiplied by 100. Women's role in military establishments is examined in terms of two separate measures. While the female military participation ratio is used as an indicator of the degree of female mobilization in a population and is computed in the same way as the male MPR, the percent of all military personnel who are female is employed as a measure of the utilization of women in the armed forces. Since detailed data such as that examined in the case of the United States is not generally available for the other developed nations, the comparative analysis of rank structures



will be limited to measures of the percent of total personnel in major rank categories.

In most cases, percent officer and percent non-commissioned officer (NCO) will be studied, because these data are generally available and the last chapter demonstrated that trends in these variables are indicative of trends in a number of other rank structure variables. Where data is available the discussion will be broadened to include breakdowns of ranks within the officer corps. The decline in the importance of the ground force is measured by the Army's percentage of the total personnel strength. Even though the ratio of military personnel is shown in Chapter II to be inappropriate for measuring the process of civilianization in the United States armed forces, this indicator is retained in the comparative analysis in the hope that some additional insight might emerge.

By comparing the military institutions of these six developed nations, several relevant outcomes should be reached. First, it will be possible to accept or reject each of the hypotheses stated at the end of the previous chapter for each of the nations on which data is available. From the results of this exercise, it will be possible to place some limits on the decline of the mass armed force as a macro-level organizational theory, since those aspects of the theory which are simultaneously applicable to a number of nations can be easily separable from those which are not. Finally, the findings of this chapter will set the

stage for discovering the validity of the two propositions expressed in Chapter I--that the decline of the mass armed force is a multi-faceted but related process of institutional change and that similar processes of military change operate among the developed nations.

### Size

The significance of absolute size is highly contingent on a number of demographic, political, economic, and historical factors. For instance, an armed force of one hundred thousand constitutes a very different sort of military commitment for a nation of ten million and a nation of one hundred million. In the same way, an armed force of one hundred thousand men for a nation during peace time is a totally different matter for the same nation at war. For this reason, an examination of the record of changes in the total size of an armed force provides an excellent context for gaining an overview of the historical development of military institutions in a specific nation.

From an organizational perspective, however, a second approach to variations in the absolute size of the total force becomes apparent. Work by Haire (1959) and Blau (1970) on organizational development has shown absolute growth in total personnel to be significantly related to a number of other structural variables relevant to the functioning of an institution such as the development of hierarchies and lateral differentiation. It is not difficult to imagine,

then, that such vital military functions as centralized command, control, and communication constitute qualitatively different kinds of tasks in a force of one hundred thousand as compared to a force of one million. In this second sense, absolute size can be viewed as a necessary variable in any dynamic model of institutional change in armed forces.

The graph of the overall size of the armed forces for the United States shown in Figure 1 bears, as a result of its association with a changing foreign policy, the marks of international conflicts and arms races. While the most striking features of the graph are the significance of the so-called ratchet effect prior to the Second Indochina War (see Chapter II) and the incredibly large mobilizations for the World Wars, other historical and political trends can be discerned. For example, the small hump in the early sixties represents the brief recommitment to belligerence on an international scale which characterized the political and economic goals of the Kennedy administration. The relatively small and very stable military organizations of the turn of the century and the interwar period illustrate the minimal role of the military in government policy which has been noted by Huntington (1957) and Janowitz (1971c).

Its similar pattern of World War involvement is, of course, responsible for the general resemblance between the absolute size graph for the United Kingdom shown in Figure 14 and that just examined for the United States. There are, however, some very relevant historical differences. Especially



when the difference in scale due to the significant difference in population is taken into account, the British mobilization for World War I is shown to be much more dramatic than that of the U.S. The "hump" in the graph which constitutes the British resolution of the Boer War at the beginning of the century results in a slight demobilization of the armed forces up until 1910. This phenomenon or the post-war triumph of the Labor Party may account for the non-occurrence of any ratchet effect on the British military following the first world war. Without doubt though, it is in the post-World War II period that the different international roles of the United States and the United Kingdom are most evident. The minimal effects of restrained neo-colonial adventures and cold war involvement vanish in the mid-fifties and from that point forward a steady decrease in size dominates the British military establishment. From Figure 14, the 1962 transition to an all-volunteer system appears of small significance in a more long range process of troop reduction.

As the analysis moves beyond the two Anglo-Saxon nations in the data set, available information is neither so detailed nor so complete. For Germany, France, Sweden, and Japan, we do not even have the total number of military personnel from the beginning of the century, and a number of large gaps in the data will plague the following.

France entered the twentieth century as one of the mightiest of the great military powers. The pre-World War I data in Figure 13 reveals that France in that period possessed

a land force which was larger than the United Kingdom's entire military establishment and nearly five times the size of the entire U.S. force. From casualty data alone, it can be inferred that France's mobilization for World War I was somewhat greater than that of the United Kingdom. Vagts (1957) credits France with being the nation most responsible for the disintegration of inter-war disarmament. Still, Figure 15 shows at least a temporary attempt at troop reduction, a trend which seems to have not been reversed until after 1933. The change of government in Germany can be assumed to have figured heavily in this turn of events. France's precipitous defeat and the institutional distortions of Vichy rule make the gap in the data from 1938 to 1950 expected though lamentable. Unlike that of the United States or the United Kingdom, France's 1950 military force was smaller than its pre-World War I and pre-World War II levels, but the size of her military increased during the late fifties and early sixties as France attempted to retain through force of arms political and economic control over her former empire. With the failure of the colonial wars, the size of the French military again declined. From the mid-sixties to the present, the French military establishment has remained stable. The fact that this level is somewhat higher than the British level is probably a result of France's continuance of conscription, an institution for which there remains considerable traditional and normative support among the French populace.

The Federal Republic of Germany is also a case which is

in many ways dissimilar to the other nations in this study. As with France, Germany entered the twentieth century as one of the nations epitomizing the mass armed force model. Unlike France, the United States, or the United Kingdom, Germany faced the post-World War I period with a very strict set of maximum personnel effectives imposed by the Treaty of Versailles. Under the forceful scrutiny of her former adversaries, Germany was allowed no air force. She was restricted to an army of one hundred thousand of which no more than four thousand men could be officers and a navy of fifteen thousand with an officer maximum of ten percent. The available interwar figures on the German armed forces are shown in Table 22.

In 1936, after four years of printing the same effectives for Germany, the League of Nations Armaments Yearbook contained the following:

Note.--The official and public documents of Germany which the Secretariat has been able to obtain include no data concerning the effectives of the German armed forces for the year 1936. According to unofficial publications, the effectives envisaged for the army would be 550,000 officers, non-commissioned officers and men. The accuracy of this figure cannot be vouched for.

Vagts (1959:424) suggests that the Reichswehr had begun to secretly rearm prior to the National Socialist rise to power. However, he (416) points out that "immediately after Hitler's coming into power budgetary publicity was ended in Germany, and all became 'secret' about the army. Only by devious calculations could experts compute the use which the



German army made of this liberty." One source (Yust, 1947) estimates that in 1938, Germany had mobilized a standing army of 750,000 reinforced by an army reserve of 3,150,000. The same source estimates Germany's air force at 206,000 men with 20,000 reserves. Another source (Dupuy, 1940:31-32), using known divisional strengths, calculates Germany's 1940 army as approximately 1,508,000 men on active duty, her navy at 50,000, and her air force at 206,000.

The end of the second world war brought about not only the dismantling of the Reichwehr but of the German nation itself. As the Cold War intensified, her Western allies urged the Federal Republic of Germany to establish a standing force capable of at least a token defense effort. According to official documents, the Bundeswehr is to be capable of no action beyond that of a component of NATO forces. The total size of Bundeswehr forces from 1956 to 1974 is shown in Figure 16. A tentative assumption is that the armed forces of the FRG have, at least with respect to size, approached the same model as that of France and the United Kingdom. This seems more likely to be true for the former than the latter since the FRG still relies on conscription.

Sweden, the fifth nation in this analysis, is unique in its traditional commitment to non-alignment in peace and neutrality in war. Universal service maintained by conscription is a cornerstone of Swedish military policy with the concept of a citizen army reaching back to Gustavus Adolphus in the seventeenth century. The available data on Sweden's armed

forces for the inter-war period is shown in Table 24. In comparison with the other nations in the study, the most outstanding feature about the Swedish armed forces is their consistently smaller size. The average size of the entire national force for the inter-war period is scarcely more than one-third that of the Versailles-mandated Reichswehr. Mission is, perhaps, one of the crucial distinguishing factors in these disproportions. Mobilization for neutrality and the peacetime cadre necessary for such mobilization apparently require considerably fewer personnel than broader and more flexible defense strategies. Still, it is important to note that Sweden's "neutrality" mobilization for World War I placed severe strains on the nation's economy. The first Russo-Finnish War in 1939, brought national anxieties which led to a mobilization of a 150,000-man army (Dupuy, 1940:20). Even then World War II neutrality was sustained only through a complicated process of diplomatic give and take.<sup>1</sup>

More recent data shows the Swedish armed forces are smaller now than in the inter-war period. This may be the result of capital-intensive war technology or a more stable international balance of power. From the perspective of

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<sup>1</sup>Early in the war, Sweden refused to allow the transit of French and British soldiers to Finland, but with the fall of Norway in June 1940, Swedish railroads were opened to German war materials and troops on leave. On June 25, 1941, under heavy diplomatic pressure, Sweden permitted the passage of an entire division of German soldiers from Norway to Finland. Sweden continued to mobilize as Germany's position in the war deteriorated, so that by the summer of 1943, Sweden's railroads were closed to German traffic, and trade agreements were signed with the Allies (Encyclopaedia Britannica, 1972).

size, the Swedish military establishment is above all small and stable.

One non-Western nation, Japan, is included in this cross-national comparison of military institutions. Though substantial evidence exists concerning the direct Western origins of Japanese military forms (Warner and Warner, 1974), there can be no denying the significant effect on the twentieth century military of a seishen (spirit) peculiar to Japan. Humphreys (1975) examines the modern remnants of this seishen and traces its roots through the feudal period into the prehistory of the Japanese people. He, along with other scholars, marks the ascendancy of Japan as a major military power at the 1905 triumph over Russia. This ascendancy was marred only by a series of political and economic impediments in the early and mid-twenties. From 1930 onward radical Japanese militarism fathered all trends. This dip in the overall personnel strength, very similar to the dip in French strength in the same period, can be seen in the fragmentary data of Table 26. By 1940, Japan had mobilized an army of 1,570,000, a navy of 107,000, and an air force of 51,500 (Yust, 1947).

As was the case with Germany, the outcome of World War II wrought total disaster for the Japanese military. For five years, there was no serious consideration of re-establishing any type of armed force in Japan, though the seen for what was to become Japan's Self-Defense Forces (SDF) was encapsulated in a 1947 memorandum prepared by



Japanese Foreign Minister Ashida. In essence, this memorandum proposed assigning the responsibility of defending Japan against external aggression to the United States, while creating an indigenous armed force capable of protecting Japan from internal communist subversion (Weinstein, 1975). In 1950, with the beginning of the Korean Conflict, the previously ignored memorandum became an institutional reality when General MacArthur authorized the formation of a 75,000-man National Police Reserve. Through a series of transitions always overshadowed by diplomatic compromises, the Self-Defense Force finally emerged in 1954.

The development of the authorized personnel strength of the SDF is shown in Figure 18. This pattern of steadily increasing size should be contrasted with the less consistent pattern of actual strengths. Such recruitment problems are not unexpected in a nation in which anti-military sentiment is high and at least one major political party regards the armed forces as unconstitutional, though a more thorough discussion of recruitment for the ground SDF can be found in Brendle (1975). The comparison of Japan with the Federal Republic of Germany is appropriate. Despite the similar roles of the two nations in contemporary history, there exist important differences of a strategic nature. Any comparison of the two countries must take into account the mirror effect of two Germanies in all matters military and the triangularization of strategic influence in the East Asian arena.

Hypothesis 1 suggested that, at some point in time, the armed forces of a developed nation will undergo a substantial decline in total personnel. This comparison of six developed nations with respect to the variable of total force size illustrates the problems which can arise from the broad simplicity of this hypothesis. For example, the Allied dismantlement and reconstruction of the military establishments of Germany and Japan constitute a transition in size from large mass armed forces to smaller organizations, but use of these cases as examples of the decline in the mass armed force would be somewhat questionable. For France, the decline in absolute size from the turn of the century through the thirties to the most recent decade is almost negligible. The trends in total force size for the United States and the United Kingdom are distorted by the magnitude of their post-World War II troop strengths. Still, it is this very magnitude which makes their contemporary declines in absolute size so marked. Only Sweden, the perfect case of the defensive nation, fits exactly the specified pattern of change by demonstrating a significant reduction in size over the years for which data is available.

#### Military Participation Ratios

The military participation ratio (MPR) as a function of population is more amenable than total personnel strength to cross-national comparison. As restated at the end of Chapter II, hypothesis two holds that, at some point in time, the military participation ratio of a developed nation will

substantially decline. The male MPR's for the six nations in the study are shown in Figure 19. Despite the obvious gaps in the data for certain of the countries, a number of observations can be made.

As with all the countries, the pattern of change in the MPR for the United States approximates the changes in total size of the armed forces of which its MPR is a function. What is most striking about the peacetime U.S. force is the astoundingly low degree of mobilization which is the rule prior to the post-World War II period. Only the Versailles-mandated Reichswehr of the Weimar Republic and the contemporary forces of Sweden and Japan approach the U.S. in this respect. After World War II, however, the United States military clearly takes on the MPR of a mass armed force, as can be seen by comparing its MPR with that of France for the available data. France, as the prototypal example of the mass armed force model, displays a consistently high degree of peacetime mobilization.

Data for war time mobilizations is available for only two of the belligerents, the United States and the United Kingdom. It is interesting that it is the older nation which displays the greater mobilization for both world wars and in the two earlier periods of peace. The United Kingdom's post-World War II MPR unquestionably rivals that of the U.S., but with the disintegration of the empire, there follows a steady decline in the level of mobilization. Japan with little serious competition in its sphere of influence after her 1905



triumph over Russia maintains a military with a comparatively high degree of mobilization throughout the earlier part of the century. Even fiscal and political crises of the twenties create only an abbreviated dip in the MPR.

That Sweden's history of neutrality can be measured in terms of defensive military potential is verified by her MPR, which remains almost twice as high as the U.S. figure during the inter-war period and is comparable to that of the belligerent nations in 1940.

With respect to male MPR, the nations in the study can be divided into two easily explainable subsets for the most recent period. France, the United Kingdom, and the United States constitute nations which in this period demonstrate a level of mobilization consistent with the mass armed force model. In each case, however, there is a gradual movement away from a high peacetime mobilization as each nation feels the costs and experiences the limits of such large MPR's in a new world situation.

For Germany and Japan, the last world war brought the total destruction of their military establishments; and, in both cases, there was some hesitation to commit national resources to the rebuilding of military institutions. With respect to MPR, it is evident that the two nations are following somewhat different policies of mobilization. The Federal Republic of Germany diplomatically face to face with the Democratic Republic of Germany began its remobilization near the Versailles-mandated MPR. As a component of NATO,

the FRG has steadily increased its degree of mobilization to a level exceeding that of the United Kingdom and rivaling the pre-World War levels of the other nations with the exception of France. Japan, on the other hand, started with an even lower level of mobilization and has had to struggle to maintain the Weimar level of personnel commitment.

In the modern period, Sweden's level of mobilization has been able to be substantially reduced from its previous levels. Comparable to that of Japan, Sweden's MPR demonstrates that in the contemporary international milieu of big-power nuclear deterrence, neutrality comes more cheaply, at least with respect to manpower.

If the most recent declines in the military participation ratio of the United States and the United Kingdom can be assumed to constitute more than temporary trends, hypothesis 2, that, at some point in time, the military participation ratio of a developed nation will substantially decline, can be said to hold for all six of the nations examined in this section.

#### The Utilization of Women

Except during the personnel strains of World War II, the use of women in the armed forces has not been an important structural characteristic of military institutions. Since 1950, though, with the growth of women's awareness of their place in society and with the end of conscription in some countries, the issue of women's role in national defense has been one of increasing concern. Hypothesis 4 and its two

testable derivations propose that the female military participation ratio and the percent female of military personnel will increase over time in the developed nations. Figure 18 displays the female MPR's in the three countries for which data is available. Interestingly enough each nation displays its own unique trend with respect to female MPR. The United States shows the expected peaks for wartime mobilization with a very drastic upward turn in 1974 shortly after the end of male conscription. The greater male MPR of the United Kingdom is shown to be congruent with a higher general mobilization of both men and women. While the male MPR shows a steady decline in the post-war period, the female MPR turns upward with the government decision to end conscription. This is a trend which the graph shows to have reversed by the late sixties when the British female MPR stabilizes. The recent upsurge in the U.S. female MPR comes in conjunction with both a broad-based women's movement on a national scale and a well publicised and determined drive by the military to achieve sexual equality within its ranks.

In the U.S. and U.K., the duration of World War II was derivative of a substantial mobilization of women into military institutions. France's entirely different World War II experience did not result in a similar occurrence. By 1950, however, the female MPR for France is beginning to rise through a very steady democratization process until the French female MPR is in 1970 comparable to that of the British and the American.



Female MPR is the degree to which the women in a particular society are mobilized. As Gwyn Harries-Jenkins (1975) has observed, the female MPR may be going down while the percentage of the military which is composed of female personnel is rising. Since a number of authors (Goldman, 1973; Harries-Jenkins, 1975) have suggested that the decline of the mass armed force brings about an increased utilization of female personnel in military institutions, it is useful to examine the second testable derivation of hypothesis 4 that the percent of the armed forces which is female will increase over time. This variable for the three countries for which this data is available is graphed in Figure 21. It is immediately apparent that the United Kingdom has consistently surpassed the U.S. and France in the military utilization of women for the time period considered. Only with the end of conscription does the U.S. break away from France and move toward the British model. This could indicate that the termination of male conscription is an essential condition for the greater utilization of women in peacetime armed forces.

Very clearly it is the percent female armed forces personnel which is the more realistic measure of the utilization of women in the armed forces. It is, however, a very interesting characteristic of organizational development in the British armed forces that the mobilization of women in that society occurred so early and to such an extent that the male and female military participation ratios show similar trends in the fifties and sixties. For this reason, it must

be concluded that the hypothesis that the female military participation ratio will increase over time is not universally applicable to developed nations. On the other hand, the hypothesis that the percent female personnel in the armed forces of a developed nation increases over time holds in all three of the cases examined.

### Rank Structure

Comparison of trends in rank structure transformation are not as straightforward as for military participation ratios for two reasons. First, the form of our data varies somewhat from nation to nation, and, second, there exist nominal and real differences among the rank structures of armed forces as well as among different branches of service from the same force. The former can be partially overcome by dealing with more than one rank structure variable, and the latter by as much as possible basing the analysis on the functional comparability of organizational categories.

In the examination of the American rank structure over time, four different approaches were taken. Modified bar-graphs constituting rank pyramids were used to illustrate the basic concepts of rank structure analysis and to underscore significant differences between rank structures at two points in time or between two services. A more convenient perspective was provided by fitting regression lines to the proportion of a service in a given rank over time and looking at the slopes and their significance. This perspective was

broadened by adding to the discussion the percentage of officers and a measure of the center of gravity of a rank structure, the mean rank. Due to the shortcomings in data hypothesis 3 that the rank structures of the armed forces in developed nations would be altered so as to accommodate more heterogeneous forms of military organization was expressed in terms of only two variables--the percent officers and the percent non-commissioned officers in a branch of service. The state of the data and history itself frequently make it necessary to concentrate on subperiods within the three-quarters century of the analysis. Since rank structure was shown in Chapter II to vary by branch of service, this section will control for branch of service throughout the analysis.

A major rank structure feature of all the armed forces in this analysis is the existence of a distinct officer corps. In the examination of the U.S. data, it was found that the proportion of each branch of service which is composed of officers has been increasing since the turn of the century. This phenomenon is considered to be consistent with the decline of the mass armed force and the result of two factors--the increasing utilization of officers in non-managerial positions and the collectivization of the decision-making process through bureaucratization.

The percent of personnel classified as officers in the Army of each nation for selected years is shown in Figure 22. The lower the percentage of officers the more it can be assumed that a given force approaches van Doorn's character-



ization of the mass armed force model. It is clear that the U.S. Army has invariably maintained a greater percent of officers than the other nations under study over most of the twentieth century. Still it is only in the post-World War II period that there is substantial deviation among the nations in the study. The Federal Republic of Germany and France, which both retain conscription, possess land forces which manifest the low proportion of officers associated with the mass force. Such a tendency is not displayed by the U.S. Army even in periods when conscription was in effect. Once again, of special note is the two totally different organizational strategies pursued by the militaries of the two former Axis powers in the modern period with Japan displaying an organizational format substantially different from that of the FRG.

With respect to the officer-enlisted composition of the navies shown in Figure 23, it is again interesting to observe the relative stability of the organizational formats of the maritime branches. Stability can, however, exist to the extreme as is indicated by the officer proportion for the French and U.S. navies in the last two decades. Additionally noteworthy are the sharp change in organizational policy for the German navy in the late sixties and the post-conscription increase in the proportion of British naval officers.

In Figure 24, the sharp distinctions which arise among nations with respect to the proportion of army officers can

also be seen to hold true for air forces. The air force of the United States is created with a relatively "non-massified" proportion of officers, while the United Kingdom rapidly moves to such a model in the ensuing years until its proportion of officers exceeds that of the U.S. It is unexpected that France and the FRG display such a "mass" characteristic even in a branch of service as technologically developed as a modern air force, though there is some evidence in the graph that, at least with respect to its air force, Germany may now be moving away from a mass model.

It is not surprising that the Royal Marines and the U.S. Marine Corps should display so similar a proportion of officers throughout the twentieth century. Fighting forces with missions for which organizational modernization seems a rather superfluous step, the two branches of service have undergone only a slight, slow movement away from the mass model.

All the nations considered in this analysis meet the hypothetical specification that the percent officers in the army increase over time, though this trend is tellingly less developed in France and the Federal Republic of Germany. The French deviation from general trends is even more apparent with respect to percent officers for the navy and air force, while Germany shows a recent fulfillment of the hypothesized innovations in the more technologically oriented branches of service.

For the United States, there were found to be substantial internal changes within each corps for most branches of

service. Especially among enlisted personnel, there has been an increase in the proportion of administrative personnel. This process is displayed by the solid lines in Figure 26. The uppermost line for each country represents the percentage of non-commissioned supervisory personnel and the lower line the percentage of rank and file enlisted personnel. As can be seen from the graph, the American experience is generally typical of the total set of countries. There is relative stability in the distance between the two lines until World War II. From then forward the gap closes until a new stability dominates in the early sixties. In the earlier part of the century, only the German army demonstrates any degree of deviation. In the period immediately preceding Nazification, the German army possesses an enlisted rank structure which is not only more characteristic of modern institutional forms than are the other armies of the period, but which is in some ways more so than the contemporary West German force. The character of the modern German army's enlisted corps is once again most similar to that of the French army's. The Japanese Ground Self-Defense Force has in the last twenty years moved steadily and with relative speed away from its more massified inception design. A most interesting extreme has occurred in the British army where there are currently more non-commissioned officers than rank and file enlisted.

With only a minimal relation to conscription, naval personnel structures display a marked consistency over time



as well as across countries. As can be seen in Figure 27, there is very little variation among the nations for which data is available. France, whose army shows particularly mass character, seems to be somewhat closer than the other nations to retaining a mass navy, while Germany with a comparably mass army possesses a navy with a more modern enlisted rank structure.

The most modernized enlisted rank structure for the United States is found in the air force. When this rank structure is graphed along side those of other countries as in Figure 28, there is revealed to be, as with navies, little cross-national variation among air forces. Despite the fact that an air force always has a mission which is closely tied to technology the early twentieth century data which is available for France and the United Kingdom reveals the mass roots of air force rank structure. In the modern period, the enlisted rank structure of the French air force is noteworthy for two reasons. First, the enlisted rank structure for the French army and navy tend more toward the mass armed force model than the other nations, while the air force possesses a comparatively non-mass character. Secondly, in the late sixties, there is an abrupt switch from an oscillating pattern, indicative of repeated policy alteration, to a more stable modernized rank structure. As with the British army, the British air force is the only one to reverse, at any time, the ratio of supervisory to supervised enlisted personnel, though the 1975 statistics indicate that a potential

equilibrium may have emerged between non-commissioned officers and the rank and file in the British air force. With respect to its air force, it is the Federal Republic of Germany which features an enlisted rank structure least far removed from the mass model.

In the analysis of the U.S. armed forces, it was noted that there has been comparatively little transformation in the officer corps during the twentieth century. The scale of Figure 29 should be kept in mind to avoid over emphasizing degrees of change. A steady growth in both the senior and junior officer ranks seems to be the rule for all the nations for which data is available. The U.S. displays a tendency to retain an excessive number of junior army officers on active duty at the end of World War II. The percentages shown here, of course, reflect the different sized officer corps of each nation, but attention should be focused on the distance which exists at each point between the junior (upper) officer line and the senior (lower) officer line at each point. In this respect, the United States, France, and the Federal Republic of Germany exhibit a similar development. Only Great Britain bears a significantly different disposition in its officer personnel with nearly as many senior officers as junior.

For the naval officer breakdowns, shown in Figure 30, a comparable similarity holds. The British navy officers are only somewhat more evenly distributed among senior and junior officers than the other nations. In this case, it is the Federal Republic of Germany which constitutes a deviant case.

The large proportion of junior officers is further exaggerated by what appears to be a more general expansion of the officer corps in the late sixties.

Air forces have been historically associated with a large proportion of junior officers who have performed a number of non-supervisory combat functions. What held for the U.S. Air Force is shown in Figure 31 to apply to those of the other nations. Only the officer breakdown for the early French air force provokes interest by bringing to mind the World War II air forces overwhelmingly composed of younger officers engaged in their very individualistic mission.

Hypothesis 3, that the percent officers and NCO's in the armed force of a developed nation will increase over time, is only minimally satisfied for the armies of France and the Federal Republic of Germany. The United States leads all others in meeting this hypothesis in the case of percent officers in the army but falls behind the United Kingdom and Japan in the case of percent NCO's in the army. France does not fulfill the hypothesis with respect to percent officers in either her navy or air force, but does not significantly deviate from the patterns of the other nations with respect to the internal structure of the enlisted ranks in these branches of service.

#### The Decline of the Ground Force

Another proposed feature of the decline of the mass armed force is a reduction of the proportion of total military personnel specializing in land warfare. Figure 32 shows the



changes in the percent of each nation's armed force which is devoted to the ground force. Since the U.S. Marine Corps performs a mission comparable to that of the traditional ground force, the gray line shows the sum of the two branches of service.

In general, the hypothesis seems to hold for all the nations in this study. Not unexpectedly, the armed forces of France and Germany in the twenties and thirties exhibit the proportionally large armies appropriate to those nations which first developed the mass armed force. The United States and United Kingdom, more geographically isolated than the other nations, manifest a substantially lower commitment to ground force personnel during the same period. Despite the post-World War II increase in overall size in these two nations, both the United States and the United Kingdom exhibit a relatively low commitment to the ground force in the modern period. On this variable as on others, Sweden has moved from a more mass posture in the inter-war period to smaller ground force in the modern period. The contemporary French force, still clinging to a tradition of conscription, retains a commitment to the ground force somewhat nearer the mass model.

Closest to the mass model among these six nations are the two former axis powers, Germany and Japan. Germany, of course, shows mass characteristics on a number of dimensions, but post-war Japan has hitherto seemed more committed to a professionalized force model. Japan's deviance in this case

may be a result of the rather unique mission of her armed forces. The less technologically oriented ground force is the branch of service most suited to the maintenance of internal security and order.

Hypothesis 5, that the proportion of ground force personnel in the military of a developed nation will decline over time, holds for five of the six nations in the study. As with other trends in military organizational variables observed in this chapter, there are decided differences in the degree and rate of decline in the ground force.

#### The Military/Civilian Employee Ratio

In the previous chapter, the ratio of military personnel to Department of Defense civilian employees was added to the analysis in an effort to examine the hypothesis that with the decline of the mass armed force, there is an increased reliance on civilian employees for the performance of tasks previously assigned to military personnel. By measuring this phenomenon it was hoped to tap at least one dimension of the more general hypothetical phenomenon of civilianization.

As can be seen in Figure 33, there has been no clearcut trend in the military/civilian employee ratio for the United States in the twentieth century. A cross-national comparison, however, yeilds somewhat more interesting results. Not surprisingly, France relies least on civilian personnel with an especially marked upward trend in the military/civilian employee ratio from 1955 to 1970. Its precipitous return to the lower level in the earlier seventies constitutes one of

the dramatic shifts in policy which have been characteristic of France on several of the variables in this analysis. At the opposite extreme from France is the case of Sweden where in recent years an already low ratio has evolved into a situation in which the defense establishment employs more civilians than it has military personnel. The German development is unique but explainable and may illustrate an important aspect in the formation of a military force in a nation where none exists. It is more easy to obtain a body of military personnel who in effect are trained after entering the military than it is to build a corps of skilled civil service personnel.

#### The Mass Armed Force Hypothesis Reconsidered

At this point, with the descriptive analysis of the available data completed, it will, perhaps, prove fruitful to re-examine the initial hypotheses on the decline of the mass armed force. It should now be possible to decide just how useful the set of concepts encompassed in the mass armed force theory are to the study of twentieth century military institutions in the developed nations. Some aspects of the theory will undoubtedly prove applicable to all the nations in the study, while others may require modification or even rejection.

The crux of the rise and decline of the mass armed force theory is that the absolute size of a nation's armed forces will steadily increase to some point in time after which the



the size of the force will plunge to some new stabilized level, never again to rise to the previous level. Absolute size is assumed to be only the most obvious in an inter-related set of variables which include degree of mobilization, heterogeneity of rank structure, utilization of women, reliance on the ground force, and civilianization.

Two of the nations which we have examined can be immediately cited as obvious exceptions to the formal hypothesis on absolute size. These are Germany and Japan. Diplomatically broken during the first world war, Germany was prohibited from maintaining a mass armed force from 1920 to 1933 by international agreements. Militarily crushed in the second world war, the defense establishment of the Federal Republic of Germany was only revived in the crunch of Cold War diplomacy. Since then, any stabilization of German armed forces has been reached from below in the last two decades. Japan's interwar armed force rivaled those of the United States, United Kingdom, and France, but its situation parallels that of Germany in the post-World War II period. Hence, as a result of external factors, two nations in this study do not conform to the theory of the rise and decline of the mass armed force.

Since Sweden's armed force in 1923 is more than twice the size of the present force, it is tempting to conjecture that Sweden abandoned the mass armed force model in the inter-war period. But a more objective analysis requires that it be admitted that traditionally neutral Sweden possesses

neither the population base nor the foreign policy orientation to maintain a mass armed force with respect to absolute size. Thus Sweden, too, must be determined to fail to meet the absolute size hypothesis of the mass armed force model.

Of the three remaining nations, France has neither eliminated conscription nor demonstrated any substantial decline in the size of its peacetime armed forces. In fact, its post-colonial war level is higher than that of 1950. With respect to absolute size, we are left with only the United States and the United Kingdom, two nations which as a result of geographic isolation do not reach their maximum mass armed force potential with respect to size until the post-World War II period.

The second variable in this analysis, the military participation ratio (MPR), is employed as an indicator of the degree of mobilization. For the most part, we have concentrated on the peacetime MPR's, since wartime MPR's can be considerably distorted. Sweden and Japan's contemporary MPR's are substantially lower than those of the thirties. The FRG's seventies MPR is higher than that of Weimar yet less than that of the Third Reich. Disregarding the colonial war escalation, the 1970 French MPR is lower than that of the thirties, and the British MPR has in the last few years sank below its interwar level. If the United Kingdom and the United States are assumed to have reached the mass armed force level during World War II, it is possible to note a subsequent decline in the MPR of each nation in the mid-fifties and at the end of

the Second Indochina War respectively.

The female MPR stabilizes for the U.K. as the male MPR begins to decline and increases for the U.S. at a similar point, while the same measure for France shows a steady increase over the period from 1950 to 1970. All three of the countries evidence an increase in the percentage of female military personnel over the same period. Hence, with respect to the decreased mobilization of males and increased utilization of females, there seems to be some support in the data.

Relying on the findings from the previous chapter that several measures of rank structure indicate the same trend in actual modifications, we here limit our attention to only two such measures--the percent commissioned officers and the percent non-commissioned officers in a branch of service. The armies of the United States, the United Kingdom, France, the Federal Republic of Germany, and Japan all demonstrate an overtime increase in the percent officers (see Figure 20). Navies are, as a rule, more stable on this variable yet the navies of the U.S., U.K., and the FRG show an increase in this variable during the twentieth century (see Figure 21). For air forces, three of the four countries on which data is available demonstrate similar increases (see Figure 22), as do even the American and British marines (see Figure 23). The percent of NCO's in the armies and air forces of the nations for which data is available also clearly reveal an increase over time (see Figure 26 and Figure 28), while data on navies indicate a marked stability on this variable (see Figure 27).



Of all the variables examined in this section perhaps the one which behaves most clearly in the manner hypothesized is the percent ground force. Only for Japan with its reliance on U.S. air and naval power does the percent ground force not demonstrate the predicted decline over time. As with all these trends, the percent ground force still displays considerable differences across nations with respect to the rate and extent of its decline.

The final variable in this analysis, the military/civilian employee ratio, exhibits the expected decline for Sweden and the Federal Republic of Germany. But while the lack of evidence for a significant over time change in this variable for France is not unexpected, a similar ambiguity in its trend for the United States is difficult to explain. As a matter of fact, the conduct of the military/civilian employee ratio for the United States must lead to the rejection of hypothesis 6 and a reconsideration of this ratio's use as an index of the process of civilianization. Shifts in the kinds of tasks performed by U.S. Department of Defense civil servants and the assignment of civilians performing previously military tasks to the Department of State may account for the inappropriateness of using this variable to operationalize the process of civilianization.

To summarize the foregoing conclusions, the following hypotheses from Chapter II are restated.

Hypothesis 1. At some point in time, the armed force of a developed nation will undergo a substantial decline in total personnel.

Hypothesis 2. At some point in time, the male military participation ratio of a developed nation will substantially decline.

Hypothesis 3. Over time, the rank structure of the armed force of a developed nation will be substantially altered as indicated by increases in the percentages of officers and non-commissioned officers.

Hypothesis 4a. The percentage of female personnel in the armed force of a developed nation will substantially increase over time.

Hypothesis 4b. The female military participation ratio in a developed nation will increase over time.

Hypothesis 5. The proportion of ground force personnel in a developed nation's armed force will substantially decline over time.

Hypothesis 6. The ratio of civilian to military personnel in the armed force of a developed nation will increase over time.

From this comparative analysis of twentieth century change in the military institutions of six developed nations, it has been possible to reject as unsubstantiated three of these hypotheses--1, 4b, and 6. Restricting the analysis to the remaining four hypotheses, it is possible to proceed to the more difficult task of examining propositions I and II--that the changes in these separate variables constitute a connected historical process and that this historical process can be regarded as multi-national phenomenon applicable to developed nations with parliamentary regimes. This is the undertaking of Chapter IV.

## CHAPTER IV

### A DYNAMIC ANALYSIS OF THE MILITARY INSTITUTIONS OF DEVELOPED NATIONS

In previous chapters, existing theories of organizational changes in the military institutions of six developed nations have been examined in a descriptive analysis. From this analysis limited as it is to comparisons of the data at fixed points in time, a rudimentary description of military change in the twentieth century has evolved. In order to move from this basic picture to a discussion of more complex propositions, a dynamic analysis must be employed. By dynamic is meant an analysis which will trace and allow the study of "the specific time paths of the variables" (Chiang, 1974:427).

The concept of change is, as Coleman (1968) notes, a second-order abstraction. So far in this study, structural pictures of military institutions at different points in time have been contrasted with one another to derive general notions of what might be transpiring from picture to picture. What is necessary, at this point, is an application of some techniques of the differential and integral calculus to describe the hypothesized processes on the "second-order" theoretical level of time. In order to accomplish this, the general strategy suggested by Coleman (1968:435) will be



followed. A model of the hypothesized process will, first, be presented in terms of differential equations. From the integrated version of these equations, the methods of regression analysis can be applied to the data in order to estimate the amount of explained variance and the parameters of change expressed in the original equations.

This chapter will consist of three sections. The first will be concerned with the basic trends in each variable over time. In this manner, the conclusions of the previous chapters can be subjected to a more rigorous test. The two additional sections will take up the more difficult task of making causal interpretations of time series data. Proposition I suggested that the observed changes in armed forces over time can be regarded as separate aspects of one pervasive historical process. This proposition could be readily accepted if it could be shown that causal relationships among the organizational variables are similar across the developed nations. To do this means making the unlikely assumption that military establishments function as closed-systems organizations (Thompson, 1967). Still a couple of the more probable of such causal linkages will be examined in the second section. The third section of this chapter will attempt to find support for the weaker assumption of proposition II that the military organization variables for different developed countries are similarly affected by changes in their separate national environments.

### Basic Trends

This section will attempt to insure that the organizational variables are actually changing in the general directions which were concluded in the foregoing chapters. This can be accomplished by estimating the rate of change in a particular variable as a function of time, in a fashion similar to the method used in Chapter II to examine changes in the proportion of a branch of service in each rank.

Coleman (1968:433) gives the equation which assumes uniform change in a variable  $x_1$  over time as

$$\frac{dx_1}{dt} = b$$

where  $t$  is time and  $b$  is a constant. Integrating he arrives at

$$x_{1t} = x_{10} + bt$$

where  $x_{10}$  is the value of  $x_1$  at  $t=0$ . Given a set of over-time measurements on a variable, the hypothetical constant  $b$  can be estimated by means of regression analysis.

The results of such a regression on time for each of the variables important to the mass armed force theory are presented in Table 28 for the U.S. All that need be considered, at this point, is the sign of each  $b$  and the  $F$  score which indicate respectively the direction of the trend and its significance. As could be expected, these results thwart any general application of a declining mass armed force hypothesis to the United States for the first three-fourths of this century. Due to the marked growth of American global hegemony and commensurate increases in military might,

the change in the military participation ratio is significantly positive. The fluctuations of the massive war mobilizations distort the results for percent of officers in the total force, though the separate results for the four services are in the expected direction and are significant. By including the World War II data in the calculation of the b's for percent female and female MPR, a certain distortion emerges as is evident from the negative sign of the b for both these variables. Despite expected outcomes on some variables such as percent ground force, this simplest level of dynamic analysis reinforces the finding of Chapter II that the trends predicted by the decline of the mass armed force hypothesis are not operative for the total twentieth century.

There does seem to be some indication that the U.S. may have entered a phase during the Second Indochina War which can be regarded as a marked movement away from the mass armed force model. Using the same procedure of regressing each variable with respect to time for the much shorter period produces the results shown in Table 29. The b's for all measures except percent NCO's for Army and Marine Corps are significant and have the expected sign. So it appears that the conclusion in Chapter II that the U.S. fits the decline of the mass armed force model in the post-Vietnam period can not be rejected as a result of these calculations.

Still this analysis brings out some very interesting distinctions between change in these variables as twentieth century trends and as more chronologically localized trends.



The most obvious of these distinctions is, of course, the contrast between MPR as a positive significant twentieth century trend and as a negative significant localized trend, but perhaps more important are the variations in the significance of the consistently signed trends when the difference in MPR is taken into account. Only the coefficients for the percent of NCO's in the Navy and Marines and the percent ground force are significant at the .01 level in both the longer and shorter time periods. Changes in the percent of NCO's in the Army and Air Force are significantly positive as long-term trends, but are not significant for the shorter period. This could indicate a century long alteration in the rank structure for these branches of service which stabilizes prior to the more recent period of change. Such differences in the sequence of organizational change will increase the difficulty in establishing causal relationships among these variables over time.

There are similarities and differences between the case of the United States and that of the United Kingdom. As can be seen in Table 30, there is again no significant negative decline in the male MPR for the twentieth century, but the rank structure variables--with the exception of Army percent NCO's--and the percent ground force have significant coefficients and signs congruent with the decline of the mass armed force hypothesis. The results of the analysis of the proposed measures for the utilization of females in the armed forces are not as would be predicted by the decline hypothesis. When

heavy World War II reliance on the mobilization of women by United Kingdom's armed forces is considered in the analysis even the percentage female personnel in the armed forces shows no significant increase over time. The significant decrease in the female military participation ratio since the first substantial utilization of females in 1939 reflects the continued high level of participation of females in the British armed forces and the positive correlation of the U.K. male and female MPR's especially in the more recent decline period. For the period from 1958 to 1975, the zero-order correlation of male and female MPR's for the United Kingdom is .23, while that of the United States, for the period from 1958 to 1974 is -.69.

Where the U.S. only showed a decline in its MPR near the end of the Second Indochina War, the U.K. shows a steady demobilization from the Korean Conflict forward. For this reason, the b coefficients for the United Kingdom from 1953 to 1975 are presented in Table 31. Since the end of conscription is considered to be a major event in the decline of the mass armed force, the b coefficients for the period beginning in 1958<sup>1</sup> are included in Table 32.

Besides the expected negative coefficient for male MPR, both subperiods evidence a significantly positive rate of change in the percent female. Female MPR remains significantly negative as a result of the generally declining size

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<sup>1</sup>It was in 1958 that the British government announced the impending termination of conscription.

of the British armed forces. The significantly positive coefficient for the percent NCO's in the army for the two shorter time segments could indicate a belated modernization of that service's enlisted rank structure.

Significantly declining in the full century computations, the percent of armed forces personnel assigned to the ground forces shows no significant trend in the most recent period. A test for curvilinearity by adding time squared results in an increase in the  $R^2$  from .01 to .71. The source of such curvilinearity has already been suggested by Harries-Jenkins (1975) as the worsening situation in Northern Ireland which has resulted in a new British commitment to the ground troops necessary for crowd control and internal security missions. That the coefficient for time squared is positive and accompanies a negative coefficient for time substantiates Harries-Jenkins' finding, by indicating a general negative trend marked by a decreasing rate of decline.

Available data is not nearly so complete for the remaining nations in this study. Still coefficients for some of the variables under examination can be computed for France, during the two decades from 1950 to 1970 if  $\Delta t$  is set equal to four years. Results are shown in Table 33. As can be seen, there is little evidence for substantial change in the variables under consideration for this period. Only the percent NCO's in the Navy and the percent female for combined services show significant increases.

Though the  $b$  for male MPR over time is not significant



in Table 33, a test for curvilinearity reveals that the addition of time squared to the regression equation raises the  $R^2$  from 0.19 to 0.87, while the  $b$  coefficients for time and time squared are 2.12 and  $-.02$  respectively. Both these coefficients are significant at the .05 level, and the resultant curve represents the mobilization for the colonial wars which occurred during this period. None of the other  $b$  coefficients produced by adding time squared to the prediction equations are significant, but substantial increases in the size of several of the  $R^2$ 's indicate a general tendency towards oscillation in these organizational variables with respect to military change in France. These oscillations were noted in the graphs in the previous chapter.

To conduct a similar analysis for Sweden would not be profitable at this time, since the data on this country is not complete enough to produce meaningful results. The  $b$  coefficient for the regression of MPR with time for 1966 to 1973 is  $-.044$  which is significant at the .05 level. The similar coefficient for the percent ground force is not significant, but it should be noted that both the MPR and the percent ground force for Sweden during this period are low in comparison to other nations under examination. Their respective means for the eight year period are 1.24 and 24.6 as compared to 2.01 and 36.9 for the United States in 1974, and 1.29 and 49.0 for the United Kingdom in 1973.

The cases of the Federal Republic of Germany and Japan pose a different sort of problem with respect to their

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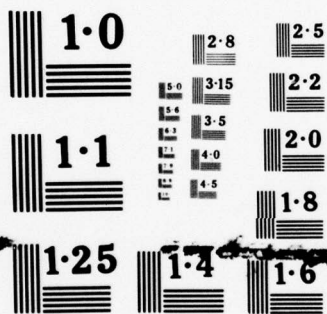
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conceptualization in terms of the decline of the mass armed force. Prior to World War II, both nation's armed forces demonstrated characteristics associated with the mass armed force model, but, as a result of the war, both nations entered the fifties faced with the task of totally resurrecting their defense establishments. It might have been expected that these two nations would construct very modernized military institutions. While this assumption has proven more well founded for Japan, the military development of both nations has been drastically constrained by the unique role of each in international diplomacy. The data for both nations is so limited that analysis beyond that of the previous chapter would not prove especially useful.

#### Intra-organizational Change

As it has been presented the mass armed force model is treated as a collection of trends in organizational variables which occur in conjunction. In the literature, there has been more of a tendency to consider these trends to be caused by a number of variables exogenous to military institutions than to elaborate the causal interaction of these variables as an endogenous process of systematic organizational change. This latter approach, referred to by Thompson (1967) as a closed-system strategy, is that employed by a number of social organization theorists including most notably Blau (1970). In such a closed-system analysis, the researcher concentrates on the causal interaction of structural variables within an organization. This section will examine, in part, the adequacy

of such a closed model to explain the processes of change in military institutions.

One type of causal hypothesis which entails an interaction of organizational variables is the suggestion that just as the early nineteenth century increase in MPR brought about the radical organizational adjustments associated with the mass armed force, so does a modern-day decline in the MPR result in the radical organizational variations associated with the decline of the mass armed force (Janowitz, 1972a; Dietz and Stone, 1975). The preceding calculation of historical trends and subtrends through the use of the regression of each organizational variable with time makes an alternative explanation much more acceptable. In this interpretation of events, the modernization of the rank structure and the de-emphasis of the ground force constitute indicators of the technological innovations in social cooperation and warfare. At some point, the positive trends in these variables make possible the decline in MPR, when technological development renders large standing forces obsolete. Hence from the preceding analysis it is possible to reject the hypothesis that a sudden decline in the military participation ratio results in the modernization of the rank structure and the decline of the ground force, but it is possible that the opposite causal relationship exists.

If such a causal connection of the rank structure and the distribution of personnel across the branches of service with the MPR exists, then there should be some uniformity of

the relationships among these variables over the countries in the study. In order to examine this possibility, it is necessary to turn to a method which Coleman (1968:441-443) provides for estimating the parameters of change in a model which explains the one-way effect of a variable on another. The theoretical differential equation is

$$\frac{dx_1}{dt} = a + b_1x_1 + b_2x_2$$

By assuming that  $x_2$  varies linearly between each pair of time points,  $t$  and  $t-1$ , and expressing the new form as

$$x_{1t} = a^* + b_1^*x_{10} + b_{2\Delta}^*\Delta x_{2t}$$

$a^*$ ,  $b_1^*$ ,  $b_2^*$ , and  $b_{2\Delta}^*$  can be estimated by regression analysis and used to estimate the original  $a$ ,  $b_1$ , and  $b_2$ .<sup>1</sup> It is essential to bear in mind that these coefficients allow an estimate of the effect of states in the independent and dependent variables on the rate of change in the dependent variable.

A very important element in the study of social change involves the  $b_1$  coefficient which pertains to the effect of

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<sup>1</sup>The formulas given by Coelman for estimating  $a$ ,  $b_1$ , and  $b_2$  from  $a^*$ ,  $b_1^*$ ,  $b_2^*$ , and  $b_{2\Delta}^*$ , are as follows. When

$$C^* = \ln b_1^*/(b_1^*-1)$$

then

$$a = \frac{a^*C^*}{\Delta t}$$

$$b_1 = \frac{\ln b_1^*}{\Delta t}$$

$$b_2 = [C^*/2\Delta t] [b_2^* + b_{2\Delta}^* C^* (b_1^* - 1) / (1 - C^*)]$$



a variable on itself. For organizational theory in particular, Blau (1970) emphasizes the effect of the size of organizational components on rates of change. In the sociology of the military, there exist non-mathematical theories which involve this concept of "feed-back" (Blalock, 1969) or "immanent change" (Coleman, 1968). When Janowitz (1970) speaks of some process such as civilianization or decline of the ground force reaching its limit, he implies that there is a negative feedback process in operation. For example, in a world where at least some ground forces are required for the implementation of national objectives, as the proportion of a military establishment devoted to ground forces declines to a certain point, the rate of this decline will begin to decrease. It is such negative feedback of a variable on itself which makes the whole notion of institutional equilibrium conceivable. Hence for non-explosive situations,  $b_1$  should be negative.<sup>1</sup>

It is important to mention that, from this point forward, only the rank structure variables for the army will be considered. First, it greatly simplifies the analysis, but, more importantly this exclusion of the rank structures of the other services is in keeping with the theoretical works on the decline of the mass armed force. Hackel (1970) and

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<sup>1</sup>A discussion of stability conditions for single-equation and simultaneous-equation dynamic models can be found in Blalock (1969:84-87, 106-126). In this analysis, these coefficients are treated as if they are constants, while in reality these coefficients are variable. For this reason,  $b_1$  could be positive at any given point in time, so long as the overall trend remains negative.



van Doorn (1975a) suggest that any study of the decline of the mass armed force should concentrate on changes in the size and structure of the army, since this is the branch of service which has most clearly exhibited the organizational formats of the mass force model. Van Doorn declares that the decline of the mass armed force is, in reality, the decline of the "mass army."

The results of regressing the military participation ratio at time  $t$  on the MPR at time  $t-1$ , each of the organizational variables at time  $t-1$ , and the increase in the organizational variable between time  $t-1$  and time  $1$ , are shown in Table 34. In order to control for the different value of  $\Delta t$  (4 years) for the French data, the  $a^*$ ,  $b_1^*$ ,  $b_2^*$ , and  $b_{2\Delta}^*$  have been transformed by Coleman's formulas into the  $a$ ,  $b_1$ , and  $b_2$  terms. Hence the contents of Table 34 should be interpreted in the following manner. The rate of change in the MPR at time  $t$  is predicted by the sum of the constant  $a_i$  term, the parameter of the MPR times the MPR at time  $t-1$ , and the parameter of the organizational variable times the value of that variable at time  $t-1$ . This is the inter-variable relationship shown in the differential equation on page 91. This assumes a linear dependence of the organizational variable on time between each time point, a linear dependence of change in MPR on the organizational variable between each time point, and that the error term for MPR at time  $t$  and at time  $t-1$  are uncorrelated.

According to Table 34, the relationship between MPR and the percent ground force, is quite different for each of the nations. While in the United States, a commitment of a large percentage of all personnel to the ground force has been associated with positive changes in MPR, the same sort of commitment to the ground force in the United Kingdom is estimated to have no effect on changes in the MPR. For France, the effect of a decline in the ground force on the MPR is complicated by the mobilization for war at the same time a modernization of the distribution of personnel among the branches of services was occurring; hence, the small negative coefficient.

These statistics are more useful in demonstrating their future promise than in providing new information on these data. For example, the parameters for MPR indicate a negative feedback for the U.S. and U.K. when the decline in the ground force is controlled, while France, engaged in sequential colonial warfare during the period covered, shows no such stability. In fact, very little could be concluded from these results, even if all assumptions were correct, due to the chronological incomparability of the data. It can only be said that for the particular time periods and nations concerned, similar relationships between the pairs of variables are not evident.

This technique may prove more useful for examining the influence of the other organizational variables on percent women. If there are commonalities which persist among the

developed nations, it is expected that the outcome equations for the United States, United Kingdom, and France will exhibit this similarity. If, on the other hand, the rational intra-organizational processes of change for militaries in each nation are subject to extra-organizational influences such as patterns of democratization and unique cultural traditions, then there should be little commonality among the estimated models of change.

Though the comparability of the data for Table 35 is slightly better, there remain major problems especially with respect to the rank structure variables. The stabilization of the percent female in the armed forces of the U.K. is indicated by the negative coefficients in the second column for all the organizational variables. Most of the coefficients can only be explained in such ad hoc fashion. The decline in the ground force seems to have had a stronger effect on the rate of increase in female personnel in the French armed forces, and the increase in officers for the U.K. may have a similar effect, but the safe assumption is that these results may be spurious since the same relationships do not occur for the U.S. Again, there is little to indicate that there are common patterns of interaction among the structural variables of the armed forces of developed nations over time.

The attempt in this section to discover similar patterns of closed-system variable interaction in the military establishments of the developed nations has produced no findings which support proposition I that the changes in the



variables for the same organization may be affected by different aspects of the environment in different ways. Hence the causal precedents of each of the five structural variables will be explored separately.

In attempting to build causal models for armed forces variables, a researcher is struck by the elusive nature of a number of the exogenous variables which hold important places in the theoretical writing on the subject. The operationalization of such variables as the growth of hedonism and periods of international tension is somewhat problematic. Armed race theories of the Richardson (1960) genre may prove useful in predicting patterns of growth when belligerent nations are involved, but are not immediately adequate to the task of modeling institutional changes and the diffusion of such among allies and neutrals which share political, economic, and cultural similarities. In the face of these difficulties, the present work will concentrate on only some of the most basic variables in the environment of military institutions. These will include population, level of military expenditure, economic development as measured by gross national product (GNP), state of the labor force by the number of unemployed, and a measure of national commitment to defense by the percentage of GNP devoted to military expenditure.

Motivation in selecting these variables is easily explained. When the mass armed force first appeared, population was the crucial resource. Because Napoleon outnumbered his opponents sometimes as much as six to one, he



was usually able to gain almost unlimited access to the other resources necessary to maintain his forces. This continued throughout the nineteenth century when only nations with comparatively large population bases were able to field the mass armies required for victory. It is expected, however, that in the modern era growth in population has a diminished effect on military change.

Government expenditure on military affairs is a variable which may have mixed effects on military institutions. In the past, extra expenditure invariably meant hiring or outfitting more soldiers. During and after World War II, increased defense funds more and more became a matter of buying expensive weaponry to raise firepower without increasing personnel strengths. Finally, with the end of conscription, men are again competing with machines with respect to cost (Oi, 1967; Dietz and Stone, 1975).

Though Janowitz (1964) has shown that a nation does not need to have reached a high level of economic development in order to afford the luxury of an oversized military, this has definitely been an important factor during particular historical periods. It is expected that, for the developed countries especially, a reduction or acceleration in GNP might have a decided effect on military institutions, though this would usually occur with military expenditure as an intervening variable. For this reason, military expenditure as a percent of GNP should prove a better predictor of change in military institutions than either of the two treated separately.

Both capitalist and communist nations have been accused of using the more easily controlled size of the military as a means of maintaining more difficultly controlled conditions in the status of the labor force. For this reason, each of the organizational variables are regressed on the number of unemployed in the two nations for which this data is available.

Table 36 shows the parameters of change in MPR for each of the five environmental variables for the three nations. Since MPR is a ratio variable of which the male population is a component, absolute size of the armed forces is used in the regression on male population. This time there exists some commonality among the countries especially on the fiscal variables. However, the effects of the level of the MPR on itself, when the various fiscal variables are controlled, are divergent enough to indicate considerable cross-national relationships between levels of mobilization, economic trends, and defense spending patterns. Unemployment has a similar effect for the U.K. and the U.S., but again the long-term incongruity in the MPR's for the two countries are evident in the constant and feedback terms. None of these environmental variables can eliminate the considerable difference in MPR trends for the three countries, when these trends are subjected to a rigorous analysis.

Of all the military organization variables employed in this study, the percent ground force displays the greatest consistency in patterns of change across the developed nations. In the last chapter, only Japan, which constitutes a special

case, did not display a significant decline in the percent of total personnel devoted to the ground force. Table 37 shows that the autoregression coefficients and constant terms for the percent ground force are relatively similar when the environmental variables are controlled. Only when GNP is considered is there a substantially different effect apparent. These results are of special note, if the non-significant time path for percent ground force for France is recalled (see Table 33.).

While controlling the effect of environmental variables has removed some of the time and nation specific deviation for the change in percent ground force, this is clearly not the case for the Army rank structure variables as can be seen in Tables 38 and 39. From the time paths for the different subperiods shown in the first section of this chapter, there is considerable evidence that transition in the rank structure even when measured in terms of major rank categories is not a consistent process over time. While Tables 38 and 39 show that patterns of change in rank structure are essentially dissimilar with respect to political and economic milieu, Tables 40 and 41 show a comparable degree of chronological divergence even when nation and environmental variables are controlled.

Just as controlling the rate of change in the percent female for the causal effects of other organizational variables failed to demonstrate a comparability of trends across countries, so does an attempt to control for environmental



effects fall short of any additional clarification of the patterns of change in this variable. As with the rank structure variables there are not even any reasonably parallel tendencies shared by any two of the three nations.

Once again, an effort to define changes in military institutions with a simplified causal model meets with little success. Only the decline of the ground force as a proportion of total personnel is indicated to be a product of demonstrably similar causal interaction with environmental variables for each of the three nations under scrutiny. Though this may seem a finding of small consequence, it is clearly not if the multitude of uncontrolled intervening and exogenous variables at work in the political systems of nation states are considered.

### Summary

In Chapters II and III, a number of hypotheses on the mass armed force in the developed nations are developed and subjected to ideal typical comparisons among nations. Although there seem to be considerable variations in the rate and degree of military change among the developed nations, the expected transformations in the variables are observed in most cases. Still the methodology utilized to this point has not been up to the task of dealing with propositions I and II--that the changes in the military organizational variables for each country represent the common process of change or that this common process of change is shared by more than one of the developed nations.



Treating each organizational variable as if it were linearly dependent on time reinforces many of the conclusions of the two previous chapters. In addition, the partitioning of the time dimension for the twentieth century reveals more clearly that while certain of the variables, percent ground force and the rank structure are subject to long-term trends, others, MPR and the utilization of women are more prone to short-term inclinations. This leads to a search for the underlying relationships among the variables and among the countries by which the validity of propositions I and II can be examined.

According to James Thompson (1967) there are two major schools in the sociology of organizations, which he labels closed and open. The second section of this chapter makes several assumptions of the former, looking for intraorganizational relationships which hold up across the three countries. Results from this effort are, for the most part, unsatisfactory. It must be concluded that this analysis reveals no common intraorganizational process of institutional change in the armed forces of the United States, United Kingdom, or France.

The final section of this chapter shifts to more of an open systems perspective, dealing with the relationship of each organizational variable to some of the environmental variables within its specific national context. Here the analysis treats the changes in each variable as a separate organizational trend, and the attempt is to find some

convergence of these separate trends once each nation's environment is controlled. Only the decline in the percent ground force exhibits an approach to a common trend when environmental factors are controlled. Hence, from this effort, it is not possible to conclude that processes in the change of the component variables are similar across the developed nations.

When changes in military institutions are examined in a comparative analysis of different time periods, general patterns of transformation are in evidence among the developed nations. When these same processes of change are subjected to more rigorous techniques of dynamic analysis, there are shown to be few similarities in the mechanisms by which the previously observed transformations occur. This results in a classic quandary of macrosociological research. How can an observed alteration in national-level phenomena be modeled when the transformations are occurring within the context of uniquely complex mechanisms for national decision-making?

So far in this work a number of significant results have been derived. In Chapter II, a case study of changes in the United States armed forces revealed that the demobilization following the Second Indochina War reduced personnel strengths below pre-war levels, the first time this has occurred in the twentieth century. In addition, it was observed that the fluctuations involved in war mobilizations have diminished for each of the U.S.'s twentieth century wars. These findings, in conjunction with the long-term trends in rank structure

alteration and decline of the ground force mark a significant departure from previous military policy that make the recent descent in the male MPR and the increased utilization of women personnel all the more relevant. The failure of the effort in this chapter to define more specific causal models should not be taken as anything other than a necessary step in the eventual derivation of such models. A task of the final chapter will be the formulation of the findings of the three preceding chapters into a structural model of military organization.



## CHAPTER V

### THE DECLINE OF THE MASS ARMED FORCE--RECONSIDERED

As a study of the decline of the mass armed force, this thesis constitutes an attempt to formally define and explore the viability of a macrosociological theory which has become a central topic of discussion in the sociology of the military. What is at issue is not so much whether there have occurred major structural transformations in the military institutions of some developed nations, but whether these transformations can be interpreted as part of a sociological process which applies to most, if not all, of the developed nations. From the outset this research has been plagued by three major theoretical obstacles--the intricacy of applying an organizational analysis to military institutions, the difficulty of making cross-national comparisons, and the complexity of modeling social change. In its completed form this piece of research must be judged by its capacity to overcome these impediments.

In Chapter I, six hypotheses are selected as the potential components of a structural model of change in the military institutions of developed nations. Through a case study of the United States armed forces in the twentieth century, these hypotheses are operationalized and presented in testable form at the end of Chapter II. The six hypotheses

and their testable forms, where appropriate, are listed below.

Hypothesis 1. At some point in time, the armed force of a developed nation will undergo a substantial decline in total personnel.

Hypothesis 2. At some point in time, the degree of military mobilization in a developed nation will substantially decline.

Hypothesis 2. (In testable form.) At some point in time, the male military participation ratio of a developed nation will substantially decline.

Hypothesis 3. Over time, the homogeneity of a developed nation's armed force as exemplified by a pyramidal rank structure will be altered so as to facilitate more modern heterogeneous forms of organization.

Hypothesis 3. (In testable form.) Over time, the rank structure of the armed force of a developed nation will be substantially altered as indicated by increases in the percentages of officers and non-commissioned officers.

Hypothesis 4. The utilization of women in the armed force of a developed nation will increase over time.

Hypothesis 4a. (In testable form.) The percentage of female personnel in the armed force of a developed nation will substantially increase over time.

Hypothesis 4b. (In testable form.) The female military participation ratio in a developed nation will increase over time.

Hypothesis 5. The concentration of personnel in the ground force of an armed force will, over time, shift to the more technologically based branches of service.

Hypothesis 5. (In testable form.) The proportion of ground force personnel in a developed nation's armed force will substantially decline over time.

Hypothesis 6. The armed forces in a developed nation will undergo a process of "civilianization" over time.

Hypothesis 6. (In testable form.) The ratio of civilian to military personnel in the armed force of a developed nation will increase over time.

### Military Organization and Military Purpose

From the case study of the United States, there emerge a number of relevant findings pertaining to the applicability of the mass armed force model to this one nation. With respect to absolute size and level of mobilization, the U.S. military establishment has only taken on the characteristics associated with a mass armed force in the aftermath of World War II. On the other hand, the decline in percent personnel assigned to the ground force and the alteration of the rank structure are on-going trends at the turn of the century. One response to these results is to assume that the United States adopted a mass armed force model during the Second World War and maintained it until the Second Indochina War.

There is even a seductive historical geography explanation for why the mass armed force model should appear so late in the United States. According to Vagts (1957), the mass armed force had its origin in the strategic interaction among the great European land powers at the beginning of the nineteenth century. Its geographic isolation and its relatively effortless economic and political domination of its neighbors placed the United States under no such strategic pressure prior to World War II. At the termination of World War II, the United States military forces stood at the edge of the country's new sphere of influence. Direct border contact with a potential enemy and new geographically unlimited weaponry, at last, placed the United States in a strategically explosive situation. America's response in



maintaining a mass armed force has not been unlike that of the early nineteenth century European nation states when faced with a similar state of affairs.

This interpretation is tainted by several factors. Although the post-World War II force fits the mass armed force model with respect to the size and mobilization criteria, its rank structure and distribution of personnel by branch of service for the same period are not at all compatible with the model. More importantly the foregoing explanation does not account for America's previous assumption and consequent abandonment of the mass armed force model during World War I.

In Chapter I, it was stated that this research would focus on the organizational aspects of military institutions. The only escape from the present theoretical dilemma is, however, to return to the broader dialectical perspective of the military as an organization and as an instrument of national policy. In the realm of military purpose the equivalent of the organizational decline of the mass armed force is the movement from "a mobilization force to a military force in being." Janowitz (1971a:xii) has argued that the period between the end of World War II and the Second Indochina War is a period of transition in the military policy of the United States from a cadre force capable of providing an organizational backbone of massive mobilization to a force which can react to military crises almost instantaneously without a mobilization.

From this perspective the fluctuations in the U.S. military participation ratio, which can be observed in Figure 3, can be more conveniently explained. The low pre-World War I and inter-war levels represent the cadre force operating under the assumption that mobilization would occur in the event of a national crisis. At the same time, the organizational processes of modernization continued to function as the proportion of total personnel in the ground force continued to diminish and the mean rank indices to climb. It is noted in Chapter II, that the fluctuations in the size of the armed force for World War II are higher than those for World War I. The demobilization at the end of World War II was not complete. The United States had in part already converted to the "force in being" concept on the policy level. Reconsidering the aforementioned historic and geographic factors which were in effect at the end of World War II, the motivation for the shift in policy needs no further explanation.

Controlling for the policy aspect, the post-World War II armed force can be considered, on the organizational level, a continuation of the inter-war format. Both relied on the mass armed force model of military organization. The more recent decline in the military participation ratio is not a return to a mobilization strategy on the policy level. It is in all likelihood the result of variation in other policy-level variables which stem from some of the diplomatic and mass psychological stimuli already mentioned in the literature.

Hence, for the United States the decline of the mass armed force is a more coherent process than it appears from a first glance at the graph of the male MPR. At some point in time, the absolute size of the armed force does undergo a substantial decline as does the male MPR. Over time, there is a substantial decline in the percent of personnel in the ground force, and there is an increase in the percent officers and non-commissioned officers, especially in the army. In the last two decades, there has also been an increase in the percentage of females among armed forces personnel, though the extensive utilization of women in World War II is a complicating factor in this trend. Over time, no recognizable trends in the ratio of military to civilian personnel have emerged for the United States.

#### The Comparative Analysis

By use of graphs and tables, Chapter III compares the United States, the United Kingdom, France, the Federal Republic of Germany, and Sweden with respect to each of the organizational variables for which data is available. This chapter, by working with less sophisticated methodological techniques than those of Chapter IV allows the less complete portions of the data to make contributions to the analysis.

Germany and Japan with their post-World War II military dismantlement and the Weimar period in the instance of the former do not present especially good cases for testing hypothesis 1 that at some point in time the absolute size of an armed force will substantially decline. It is further



decided that Sweden does not possess the population resources necessary to achieve an armed force which meets some absolute size criteria; and France shows no substantial decline in absolute size between the thirties and the seventies. As a result hypothesis 1 can not be accepted from an examination of this data set.

A pattern similar to that of the United States holds for the United Kingdom's military participation ratio, but the marked decline in the MPR begins at the end of the Korean Conflict. This affinity between the behavior of the MPR for these two countries may indicate a parallel pattern of interaction between policy and organizational levels in military affairs. France and Sweden both show declines in their MPR's between the thirties and the modern period, though the transition is more decisive for the latter nation. The destruction of the armed forces of Germany and Japan at the end of World War II make comparison difficult, but both nations manifest lower MPR's in the modern period than in their pre-World War II belligerent states. There is then some evidence to support the hypothesis that at some point in the modern period, the MPR of a developed nation undergoes a decline. Trends in the MPR for the nations in this study, however, are far from uniform.

The rank structure variables for the five nations on which data is available show expected increases in the percentages of officers and NCO's over time. There is, however, considerable variation across countries with respect to the

degree and rate of these trends. The United Kingdom and the United States demonstrate the most developed rank structures while France and the Federal Republic of Germany exhibit forms more similar to the mass model. Patterns of such development also vary by branch of service within countries. Still, the hypothesis that the rank structure moves toward that of a more heterogeneous model holds for the armies of all the countries.

The large-scale utilization of women in the armed forces does not appear until World War II. Though there is a post-war dip in the percentage of female military personnel for the U.S. and the U.K., there is a steady increase in this variable thereafter. France shows a steady increase in the percentage of female military personnel beginning in 1950. While the female MPR is increasing in the modern period for the U.S. and France, it, like the male MPR, is declining for the United Kingdom. Hence, the hypothesis that the percentage of female personnel in the armed forces increases over time is supported for the three nations for which data is available. The hypothesis that the female MPR is increasing over time does not hold for the United Kingdom.

Percentage of ground force personnel shows a decrease for all the nations in the study except Japan, where there is heavy reliance on the United States for air and sea protection. Declines in this variable are considerably greater for the U.S., the U.K., and Sweden than for the Federal Republic of Germany and France, which retain conscription and possess strong ground force traditions.

Hypothesis 6, that the ratio of military personnel to civilian employees in an armed force will decline over time is rejected as a result of the ambiguous finding for the United States. Data for this variable is available for three other nations in the study--France, the Federal Republic of Germany, and Sweden. While the ratio is erratic over time in the case of France, the hypothesis holds for the Federal Republic of Germany. As is true for a number of the other hypotheses in the analysis, Sweden illustrates an extreme circumstance in the matter of civilian employees with the military personnel constituting a minority in the defense sector.

From the outcome of this analysis, each nation in the study can be classified with regard to its status in the transition from the mass armed force. France, with its intense ties to the tradition of conscription, remains most attached to the mass armed force model. Still, the policy debates, which for other nations have precursed major organizational transformations, are underway even in France.

The force of the Federal Republic of Germany falls very close to France on an organizational continuum. It too retains a strong traditional disposition toward conscription, but many of its mass armed force characteristics can be explained by its special ground role in the larger NATO force. There exist similarities as well as differences between the armed forces of the FRG and those of the other former Axis power in the study. Japan's self-defense force is in terms



of size, degree of mobilization, and rank structure considerably more removed from the mass armed force model than West Germany, yet in another respect the structure of her armed forces are also decisively shaped by her unique place in international relations. The concentration of personnel in Japan's ground force is extremely high, reflecting the nations' dependence on U.S. air and sea power and the special internal defense mission of its military.

A withdrawal from a neo-colonial defense posture and a narrowing of their spheres of military capability have allowed the United Kingdom and the United States to make dramatic moves in the organizational transformation of their respective military establishments. The parallels between the two nations in this respect are many with the transformation in both being initiated in the wake of major military failures--Suez and Vietnam. The question of how long and to what extent organizational trends in these two nations will continue is more a question for seers than for sociologists.

Sweden holds as unique a position among nations for the history of its armed forces as it does for the history of its government (Schumpeter, 1950:325). With its traditions of non-alignment and neutrality, its military remains the prototype of a defensive force. Its observed movement away from the mass armed force format with respect to MPR and percent ground force can only insure an even greater stability for its armed forces in the immediate future.

In light of the findings of the comparative analysis in Chapter III, the hypothetical model of the mass armed force can be stated in a form more compatible with comparative organizational analyses. When absolute size and the military/civilian employee ratio are removed from the model, the result is a classification of military organization based on four characteristics--degree of mobilization, heterogeneity as manifested in the rank structure, reliance on the ground force, and the utilization of women. Since the mass armed force and its predecessor the feudal armed force constitute ideal types, it is efficient to designate another organizational ideal type toward which the mass armed force is evolving. Since the abolition of conscription has been presented as a fundamental step in the end of the mass armed force, it is tempting to use the term "all-volunteer" armed force. Due to a recent suggestion by Michel Martin (1977) that certain nations as a result of normative traditions may retain conscription as an "organizational fiction" while moving beyond the mass armed force model with respect to other criteria, it seems safer to employ Janowitz's (1971c) term constabulary armed force. The label "constabulary", like "feudal" and "mass", goes beyond the narrow scope of organizational analysis. As a term, it captures more than any other the role of the contemporary armed forces in the developed nations. No longer are these forces potential instruments of conquest, but are charged with the maintenance of the international and domestic status quo. Since the

label explicitly captures only the military purpose aspect of the model, it does not seem inappropriate to complement the mission model with an organizational paradigm.

As an historical ideal type, the proposed newly evolving structural form is meaningless except in comparison with its antecedents. The three are shown in Table 43.

#### Dynamic Analysis

In Chapter I two higher order propositions on the processes of organizational change in military institutions are suggested.

Proposition I. The phenomena described in the above hypotheses can be regarded as separate aspects of the same historical process--the decline of the mass armed force.

Proposition II. The decline of the mass armed force is a multi-national phenomena applicable to developed nations with parliamentary regimes.

Chapter IV attempts to find support for these processes by employing some methods for analyzing social change suggested by Coleman (1968).

The first section of the chapter employs a Coleman technique used by Lieberman, Dalto, and Johnston (1975) in their cross-national comparison of mother-tongue diversity. Under the assumption that each variable is linear over time, it is possible to estimate a regression coefficient which represents the slope of the time path and test for the significance of this coefficient using an F ratio. Hence it becomes possible to state whether the magnitude of a variable has been increasing, decreasing, or staying the same over time.



The results of this approach generally substantiate the conclusions of the previous chapter. With respect to rank structure and distribution of personnel across services, trends predicted by the decline of the mass armed force theory prevail in the United States and United Kingdom, but not in France. The male military participation ratio and percent female personnel, however, only exhibit the expected trends when the time dimension is partitioned at the points where the decline of the mass armed force is said to have begun for each country. For the United States, this break is at the climax of the Second Indochina War; for the United Kingdom, at the end of the Korean Conflict and after the 1958 announcement of the impending termination of universal service. This creates a curious disparity in the sequential relationships among the variables under study. Rank structure alteration and the decline of the ground force are shown to be long-term trends, while the changes in the MPR and utilization of women are more recent trends. This finding adds further support to the suspicion that if there exist causal relationships among the organizational variables then one flow of causation may be a lagged effect of the rank structure and personnel distribution variables on MPR.

It is the discovery of just such intra-military interactions among the organizational variables which is the object of the second section of Chapter IV. Using Coleman's (1968:441-443) method for estimating the effect of one variable on another over time, an autoregression coefficient,

a coefficient of the independent variable's effect, and a constant term are estimated as the parameter components of a differential equation for the rate of change in a dependent variable over time. Since the validity of the assumptions for such equations is difficult to substantiate, these findings are compared only for sign and magnitude congruency across nations.

The results of regressing MPR on each of the rank structure and personnel distribution variables provided no evidence for the comparability of such closed system processes among the U.S., U.K., and France. A similar search for consistent relationships between percent female and each of the other organizational variables indicated the same lack of convergence among the three nations. Hence, it is not possible from this attempt to establish any theory of intra-organizational causation among these variables for the periods concerned.

An approach more compatible with the major theories on change in armed forces institutions is taken in the final section of Chapter IV. Here the methodology of the previous section is used to estimate the rate of change in each organizational variable as a function of itself and the level of several societal variables. The societal variables considered are male population, military expenditure, gross national product (GNP), percent of GNP devoted to defense, and level of unemployment. Once again, the parameters produced by this technique are submitted to only the broadest

international comparisons with respect to sign and magnitude. Only for the percent of personnel in the ground force does distinct cross-national comparability emerge.

The results of the last two sections of Chapter IV illustrate a classic problem in macrosociological research. When changes in military institutions are examined in a comparative analysis, general patterns of transformation are in evidence among the developed nations. When these same processes of change are subjected to more rigorous techniques of dynamic analysis, there is shown to be little commonality in the mechanisms by which the previously observed transformations occur. Given the immense differences in traditions, norms, political institutions, and history which separate even the United States, the United Kingdom, and France, the one convergent finding for the ground force becomes all the more meaningful.

#### The Future

The future of this research can best be discussed in terms of three sectors with the link between the first two maintained only by the existence of the third. Empirical reality is the first of these sectors and the chief concern of the researcher (as a social scientist rather than as a human being) in this sector is the task of data collection. This thesis has hinged on the assumption that recent trends will be significant in a broader sequence of historical events. An assessment of the validity of this assumption is



totally dependent upon the continued effectiveness of the data-gathering operation. At the present time, the Advisory Panel on Comparative Military Institutions<sup>1</sup> is engaged in the painstaking process of setting up and maintaining such an operation. In addition to the expenditure of academic sweat, the data-gathering process, as well as the continuation of the comparative analysis of military institutions, will be contingent upon the prolongation of the current relatively peaceful stability in international relations. Within this same century, some of this data so freely the object of discussion and analysis was a matter of national secrecy.

The second sector in which the future of this research must be discussed is that of methodology. It is this sector in which the greatest immediate opportunity to advance our knowledge of military development lies. No more detailed records are kept (or destroyed) in most societies than those maintained by military establishments.

To the social scientist, the military clerk's tedium becomes a marvelous resource of unanalyzed data. The consistency and precision of the military record-keeping routine produce time-series data of unusual potentiality. All that delays the extracting of a multitude of causal patterns from this abundance of data is the proper adaptation of statistical procedures to sociological phenomena.

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<sup>1</sup>The Advisory Panel on Comparative Military Institutions is a working group within the Inter-University Seminar on Armed Forces and Society.

Without theory, the third sector for future progress, the data gathering will be erratic and the methodological applications meaningless. Theory is not just the tool of intellect; it is its essence. By building, examining, testing, and rebuilding theories on any social process, we are able to link the thoughts of one human being to those of another and thereby institutionalize the learning process. The theory of the decline of the mass armed force has been found too complex to be either enthusiastically accepted or flatly rejected by this one piece of research. Perhaps, the best motivation for continuing to examine such macrosociological theories is expressed by Stinchcombe (1965),

. . . Until the needed research is done, we must either be satisfied with imperfectly established theory or confess complete ignorance. Since we do not in fact confess complete ignorance when we range groups from solidary to formally organized in elementary courses in sociology, but instead accept implicitly a theory which seems to be false, a confession of ignorance would be an act of irresponsibility.

APPENDIX A  
THE COMPARATIVE MILITARY INSTITUTIONS DATA SET



This research constitutes the first utilization of a new standardized data bank of institutional data on the armed forces of the world. A collective creation of the Advisory Panel on Comparative Military Research, this data set represents an ongoing labor of massive proportion. At its first meeting in January 1974, the Advisory Panel prepared a list of basic data categories including overall manpower levels, rank structure data, pay rates, and fiscal information. Though the determination of base months for each set of annual records was left to the discretion of particular panelists, the ultimate goal was a body of data extending back to 1900.

By the spring of 1975, the centralization, cleaning, and coding of the data was begun at the University of Chicago under the direction of Morris Janowitz. William Zierdt contributed rank structure breakdowns and the amount of federal expenditure for each branch of service in the United States. Additional data on the United States was gathered by the author during the following summer and winter. Tim Stone collected the data on Great Britain under the direction of Gwyn Harries-Jenkins, and the initial material on the Federal Republic of Germany was submitted by Bernhard Fleckenstein. Additional German data was provided by James Linger, while all the French material is

the contribution of Michel Martin. Ingemar Dorfer provided and is continuing to provide data on Sweden. The information on Japan was the gift of Thomas Brendle.

Albeit that considerable work remains before the Advisory Panel can reduce its data-gathering efforts to the level of a yearly routine, there now exists a tangible product of their labor. Soon their data set will exist in a form easily accessible to scholars throughout the international community.

APPENDIX B  
ILLUSTRATIONS



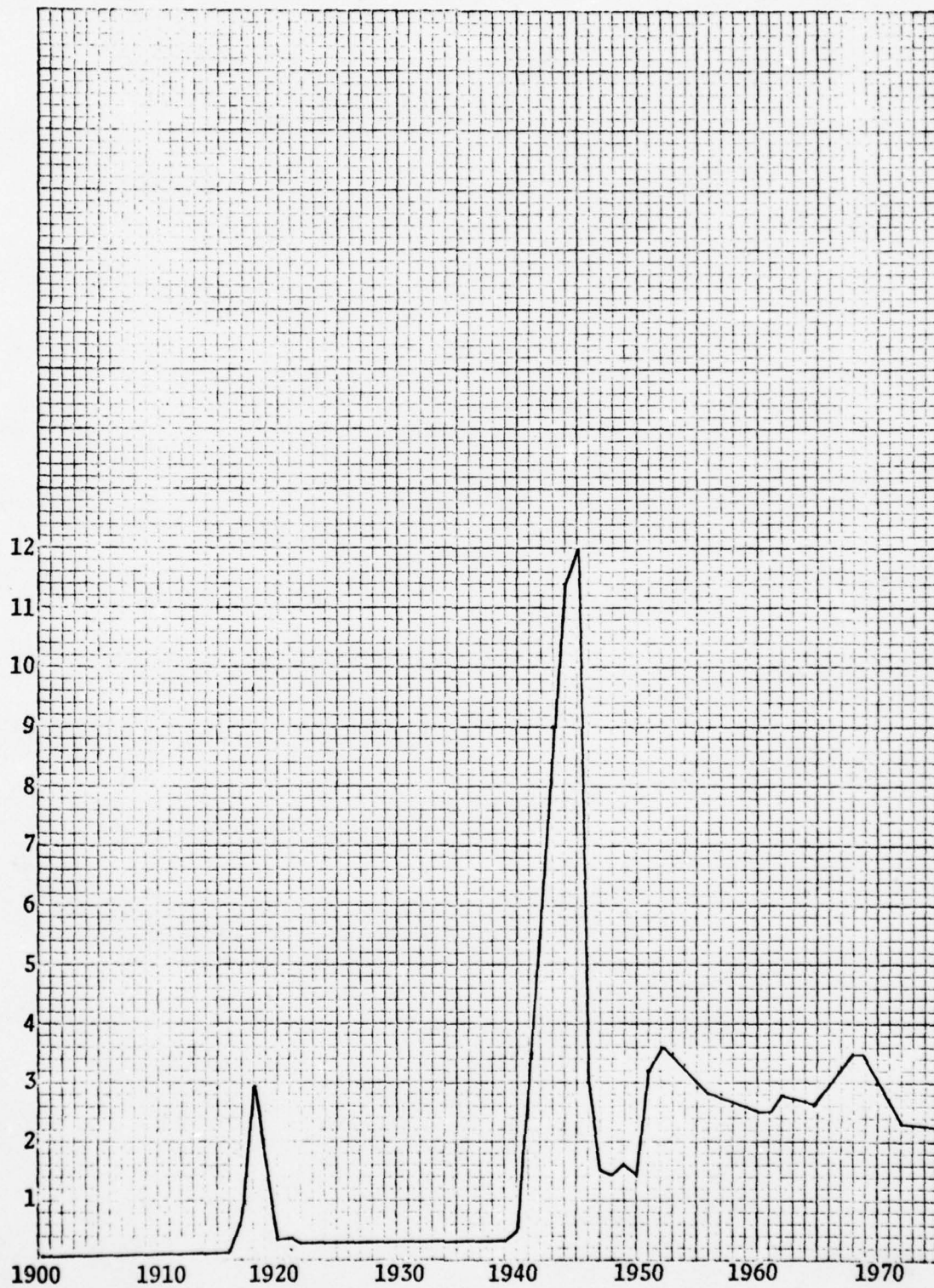


Fig. 1. Total armed forces personnel: United States 1900-1975

Fig. 2. Percent fluctuation in size of armed forces  
per year: United States 1901-1974





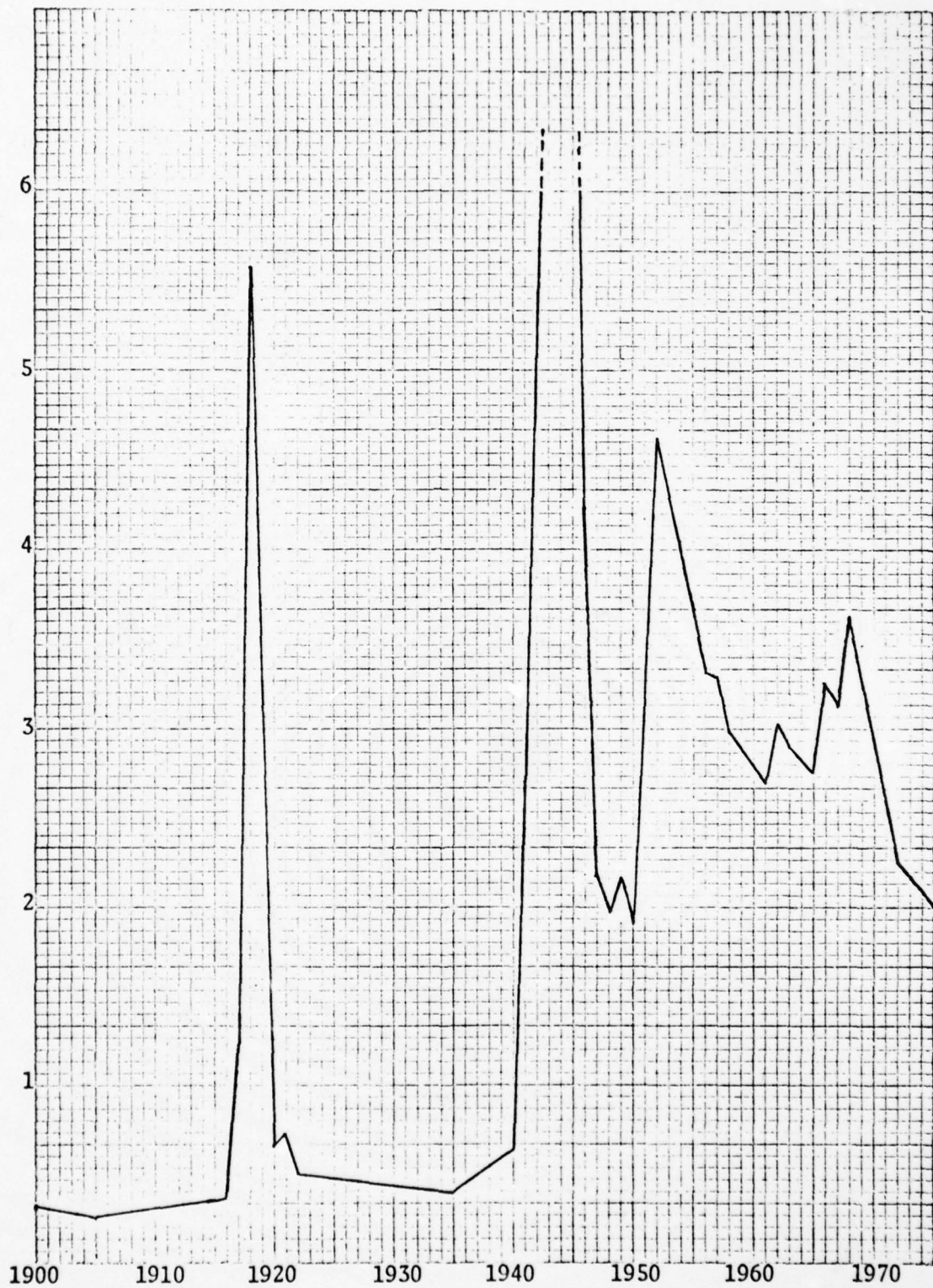


Fig. 3. Male military participation ratio: United States 1900-1974

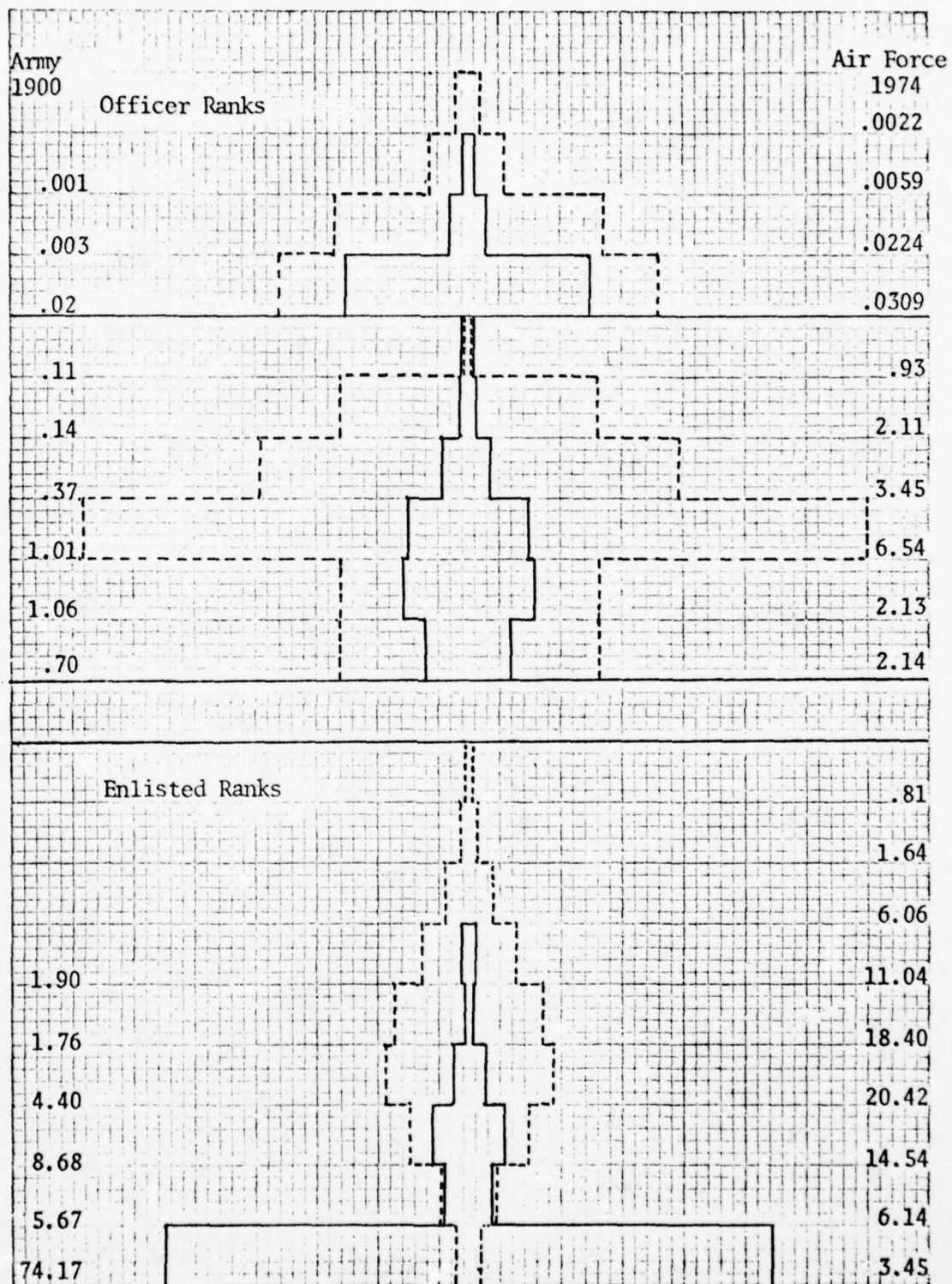


Fig. 4. Female military participation ratio and  
percent of armed forces female: United States 1941-1974



Fig. 5. Comparison of rank structures: U.S. Army  
1900 and U.S. Air Force 1974





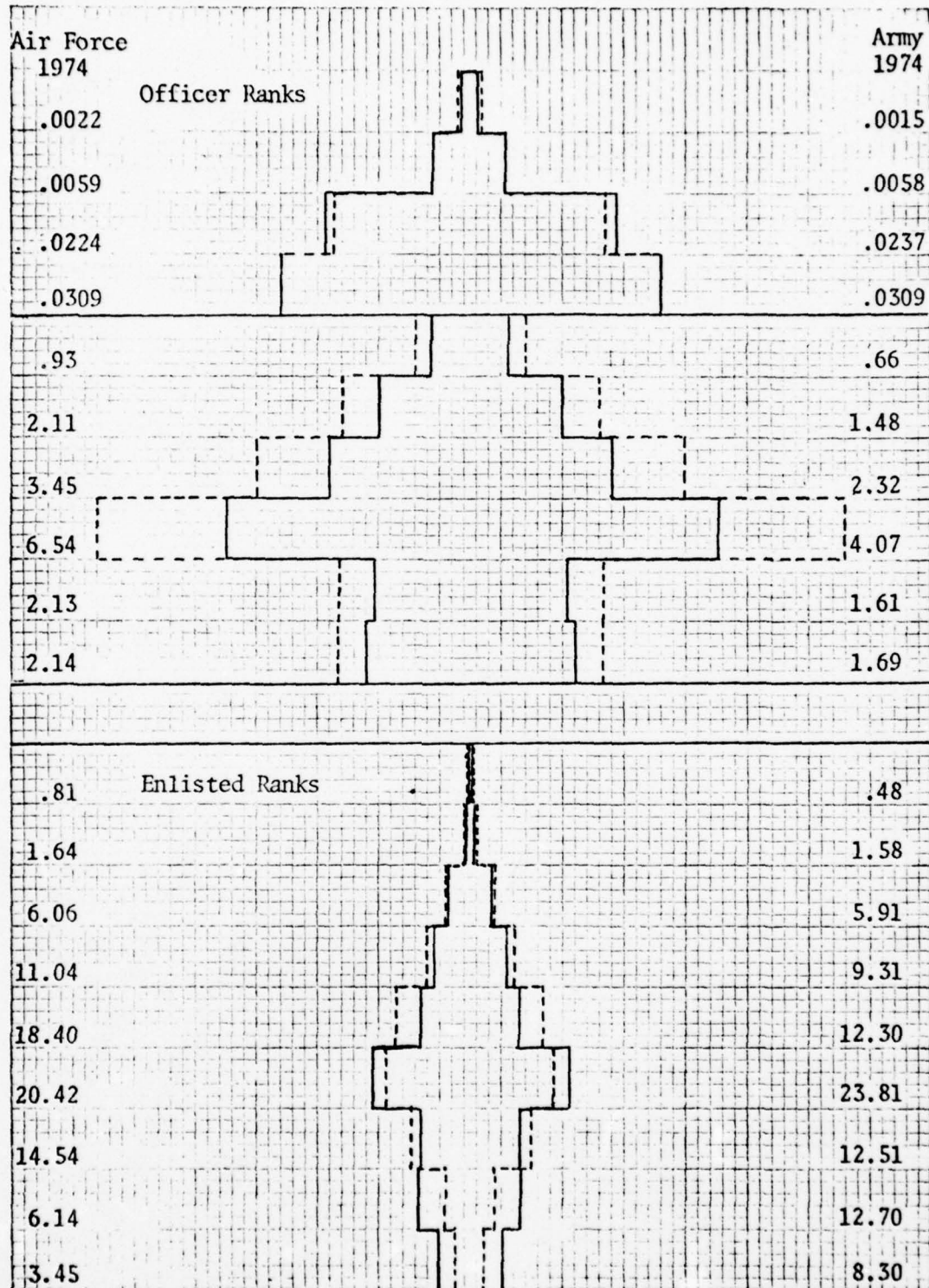


Fig. 6. Comparison of rank structures: U.S. Army and Air Force 1974

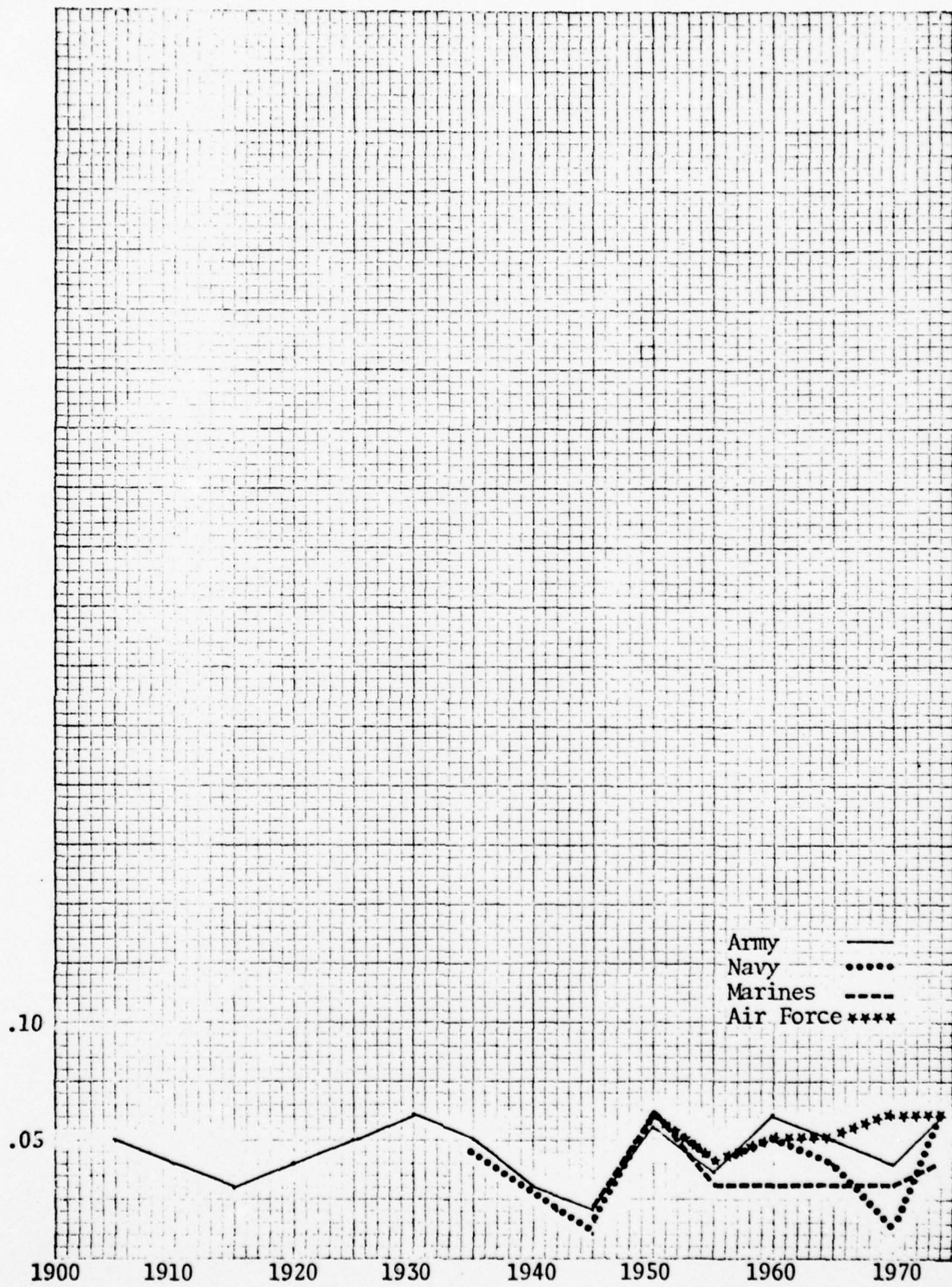


Fig. 7. Percent of general officers by branch of service



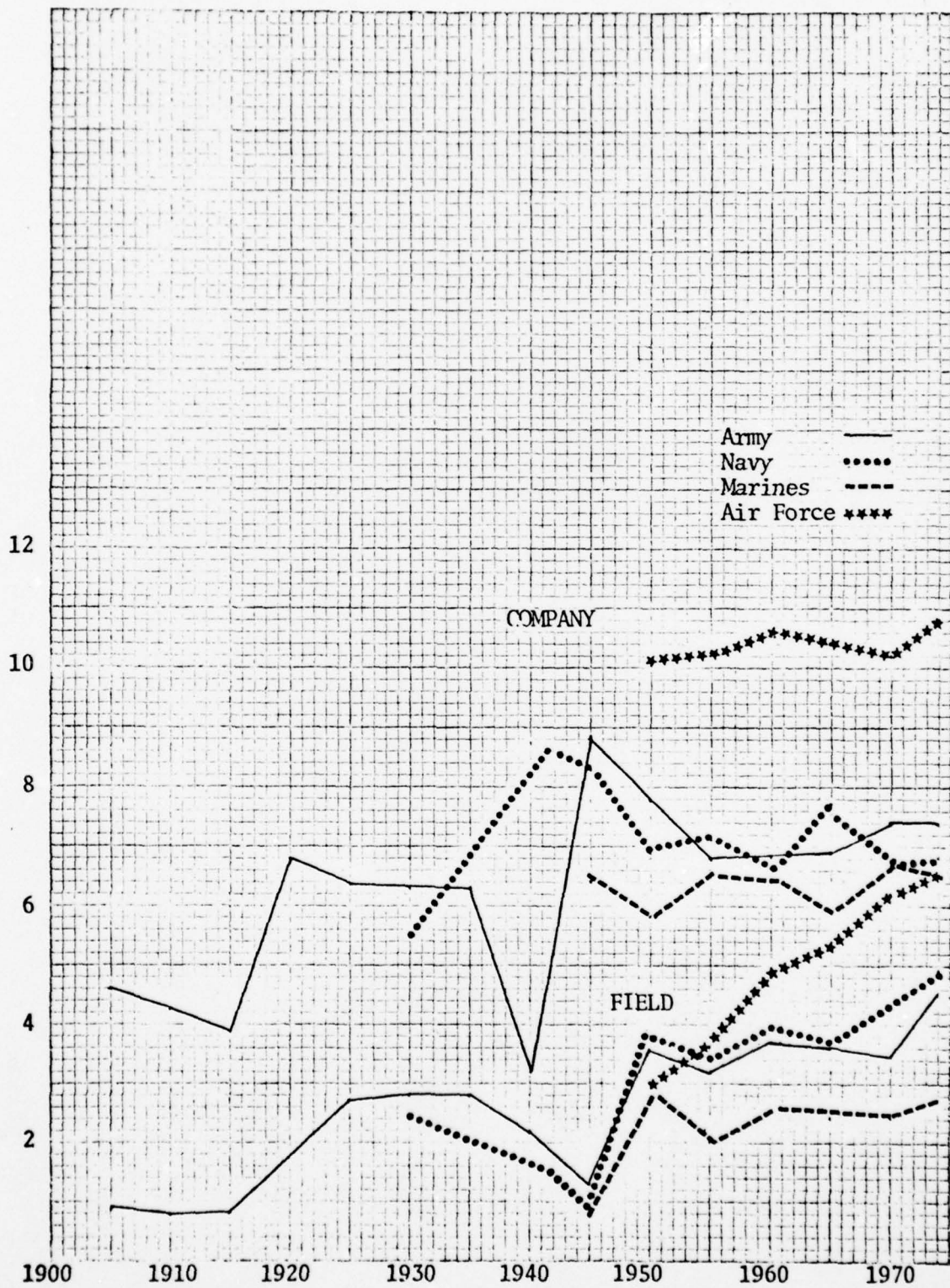


Fig. 8. Percentage of company and field grade officers by branch of service



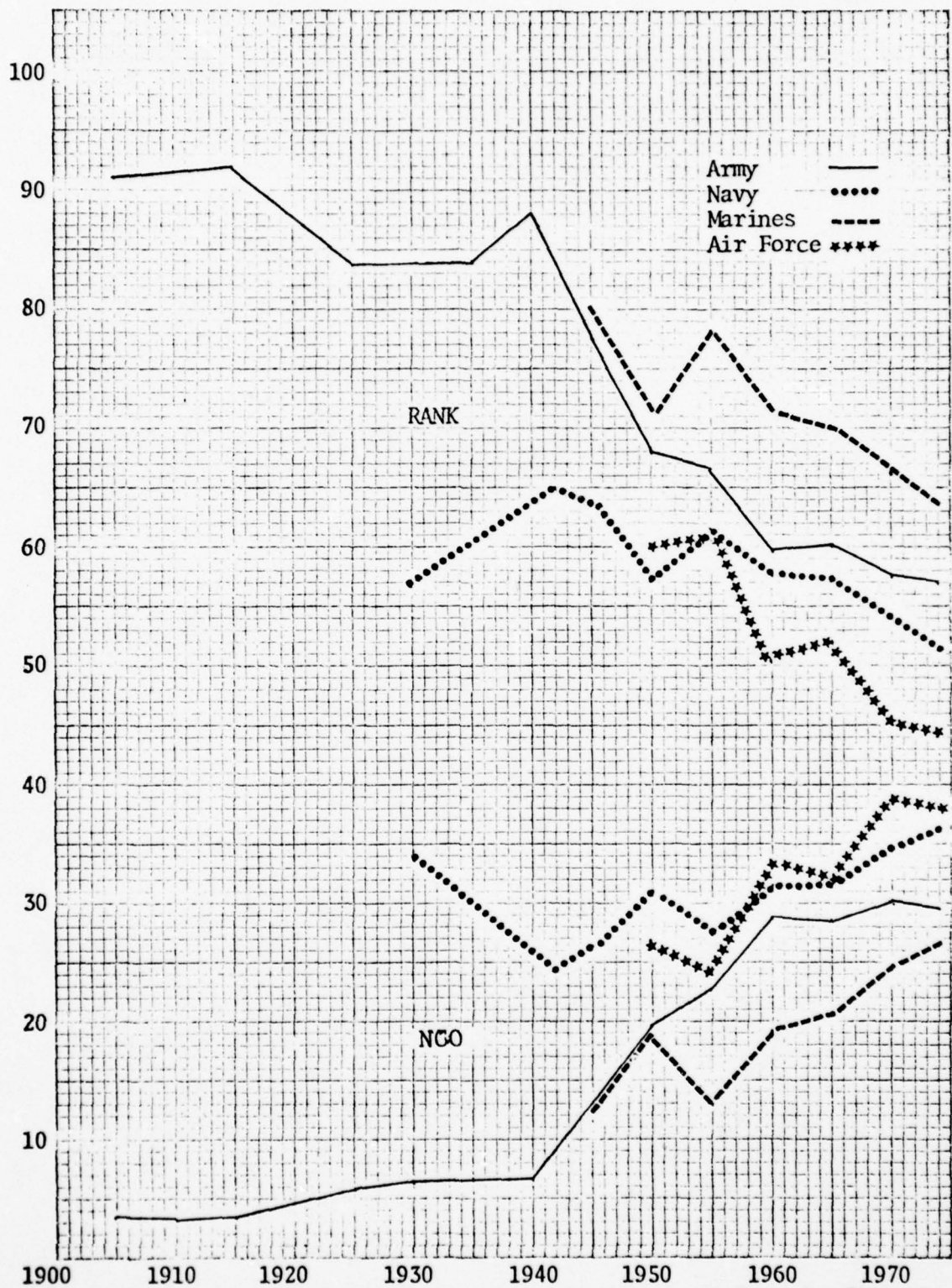


Fig. 9. Percentage of NCO's and lower enlisted ranks by branch of service

Fig. 10. Ideal types of change in proportion of total personnel in a given rank over time

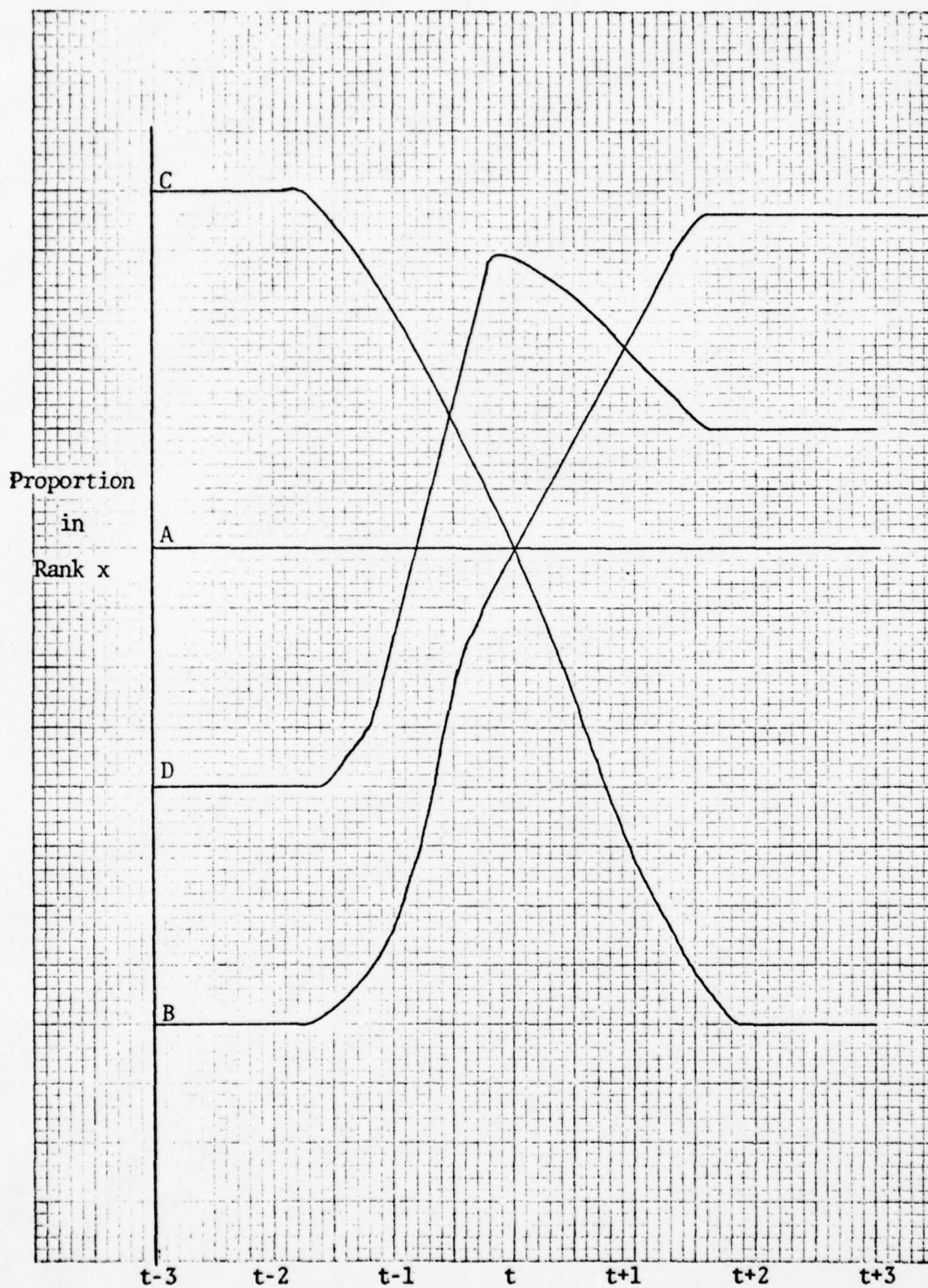




Fig. 11. Possible curvilinear function for proportion  
of Army Private E-2's over time

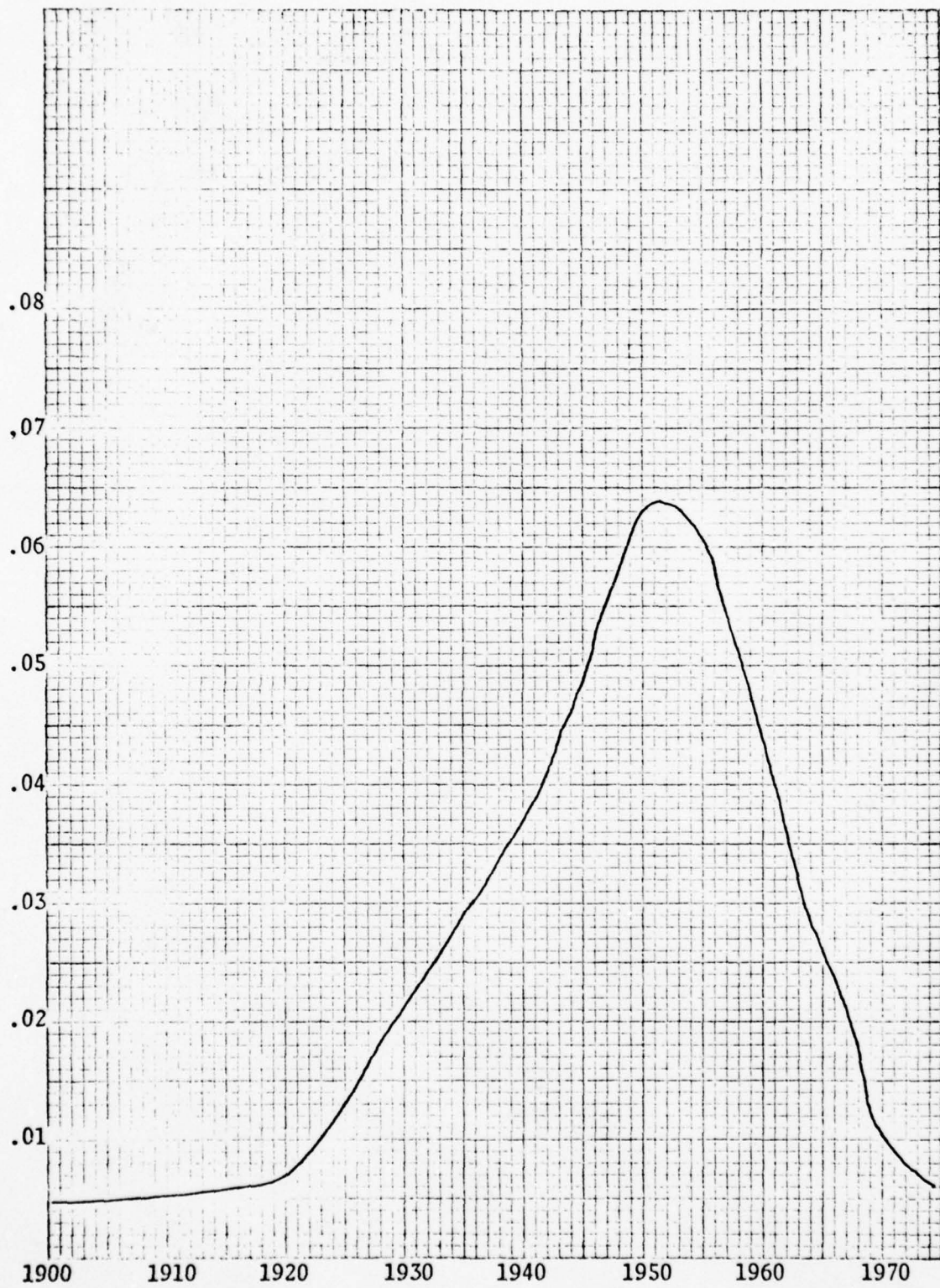
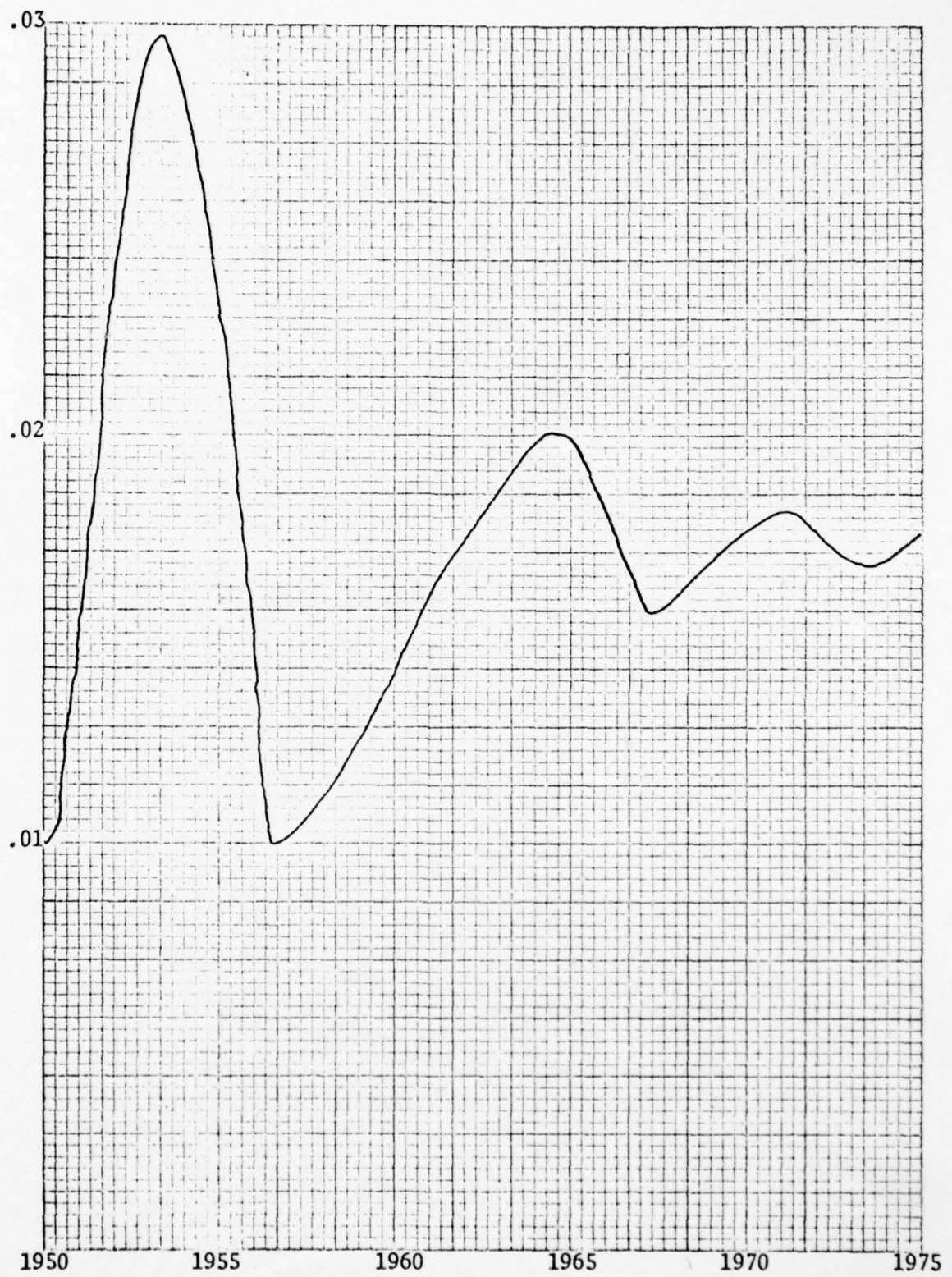


Fig. 12. Possible curvilinear function for proportion  
of Air Force Second Lieutenants (O-1's) over time





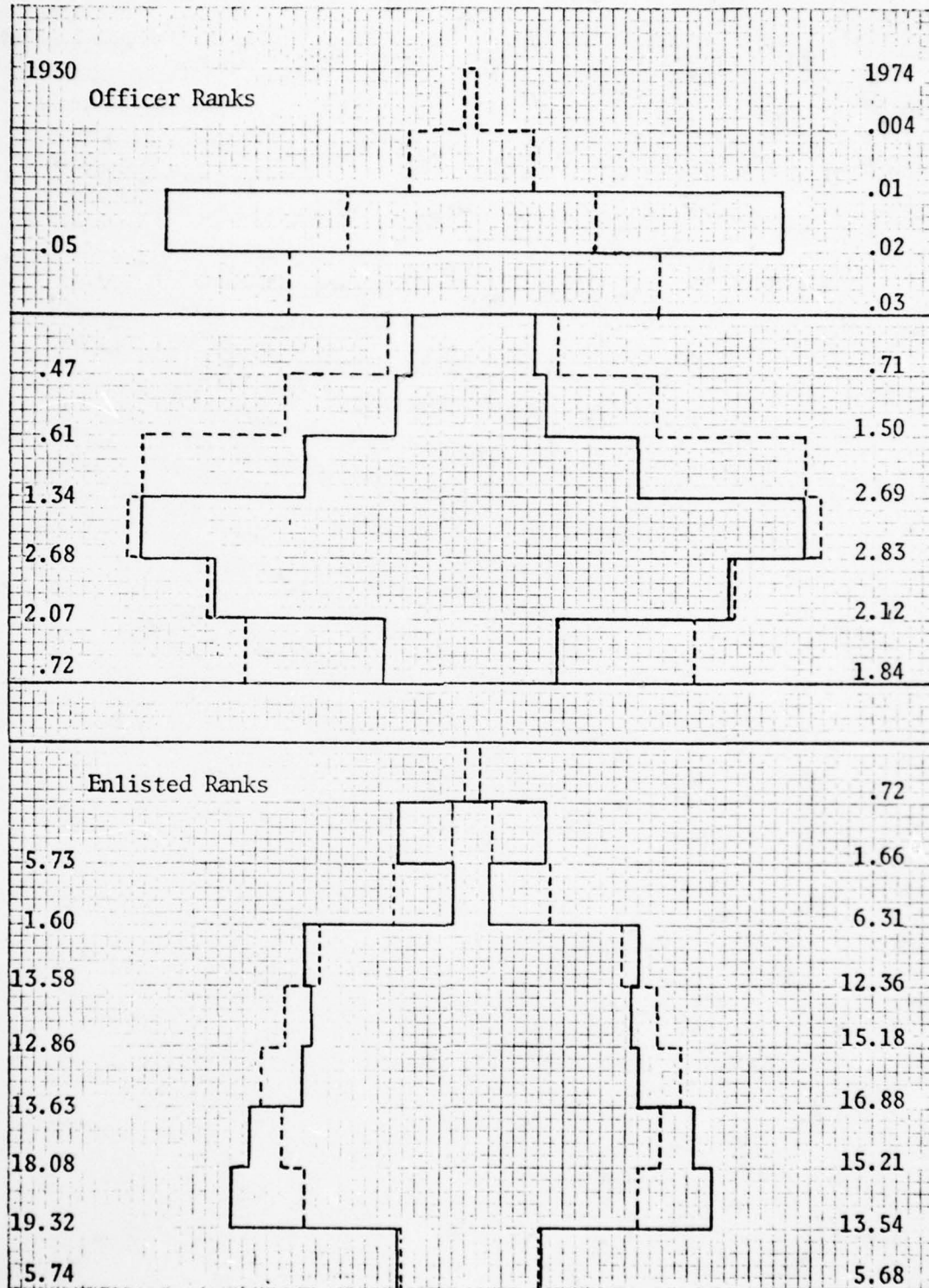


Fig. 13. Comparison of rank structures: U.S. Navy 1930 and 1974

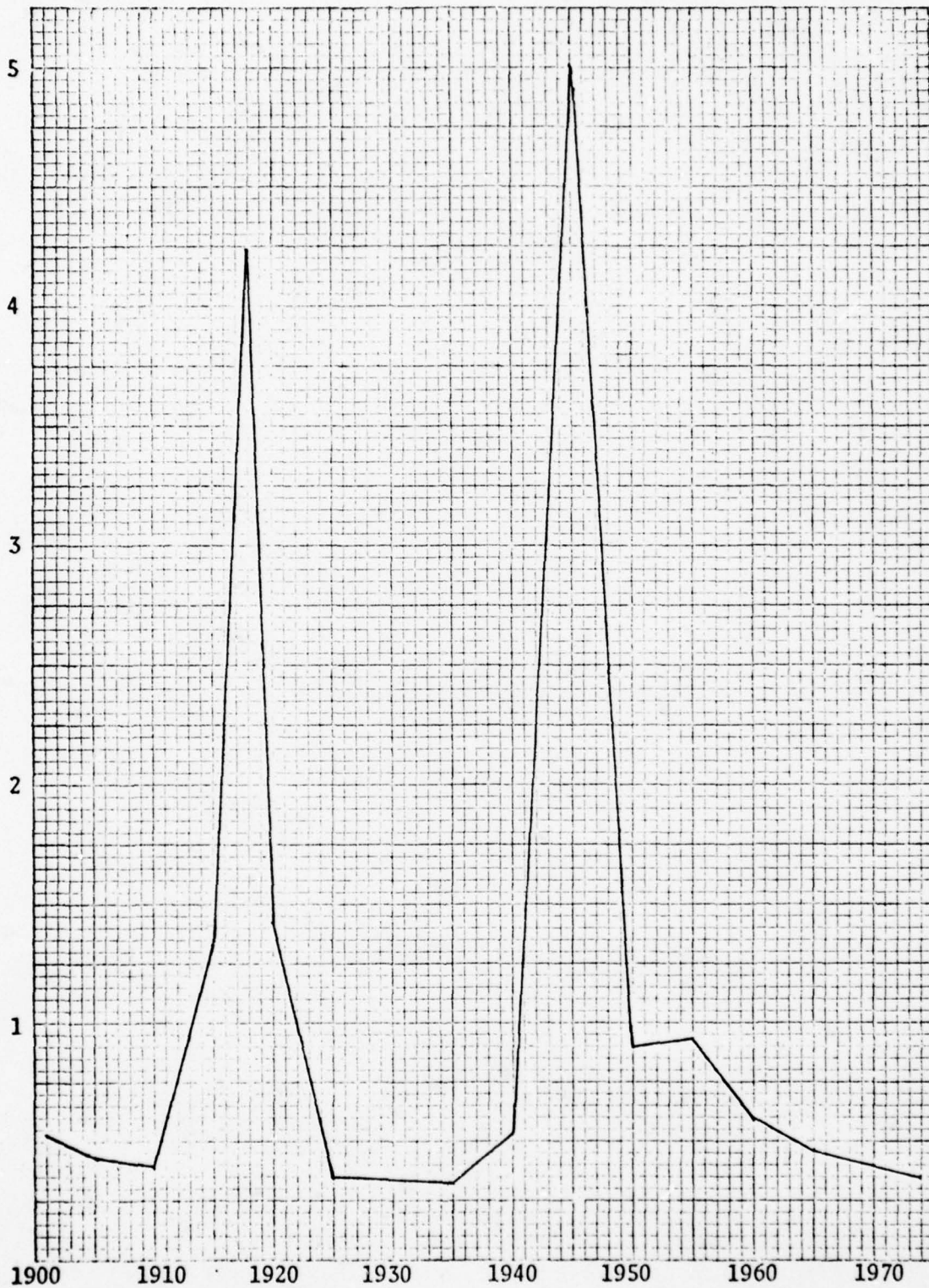


Fig. 14. Total armed forces personnel: United Kingdom 1901-1974



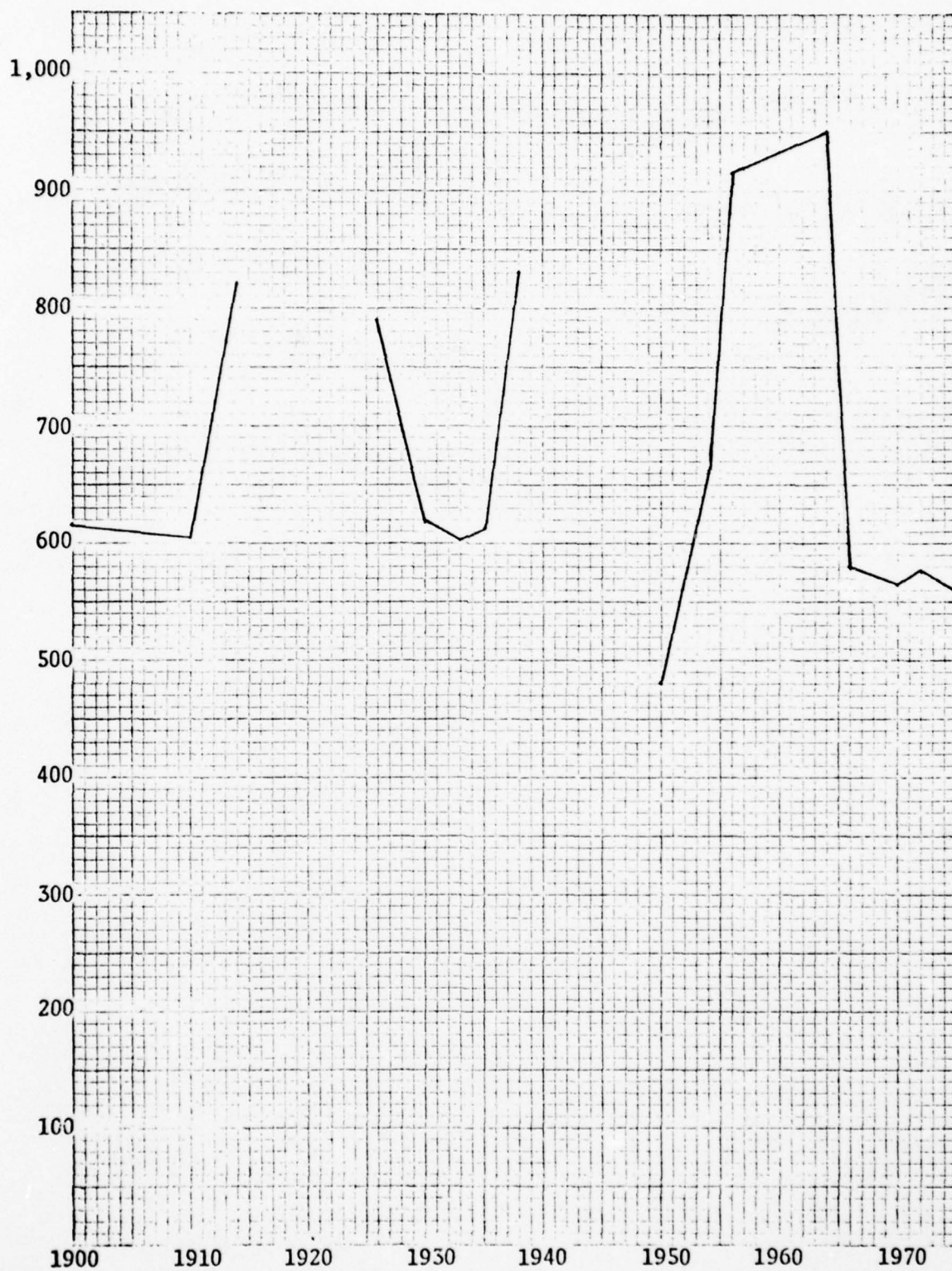


Fig. 15. Total armed forces personnel: France 1900-1975

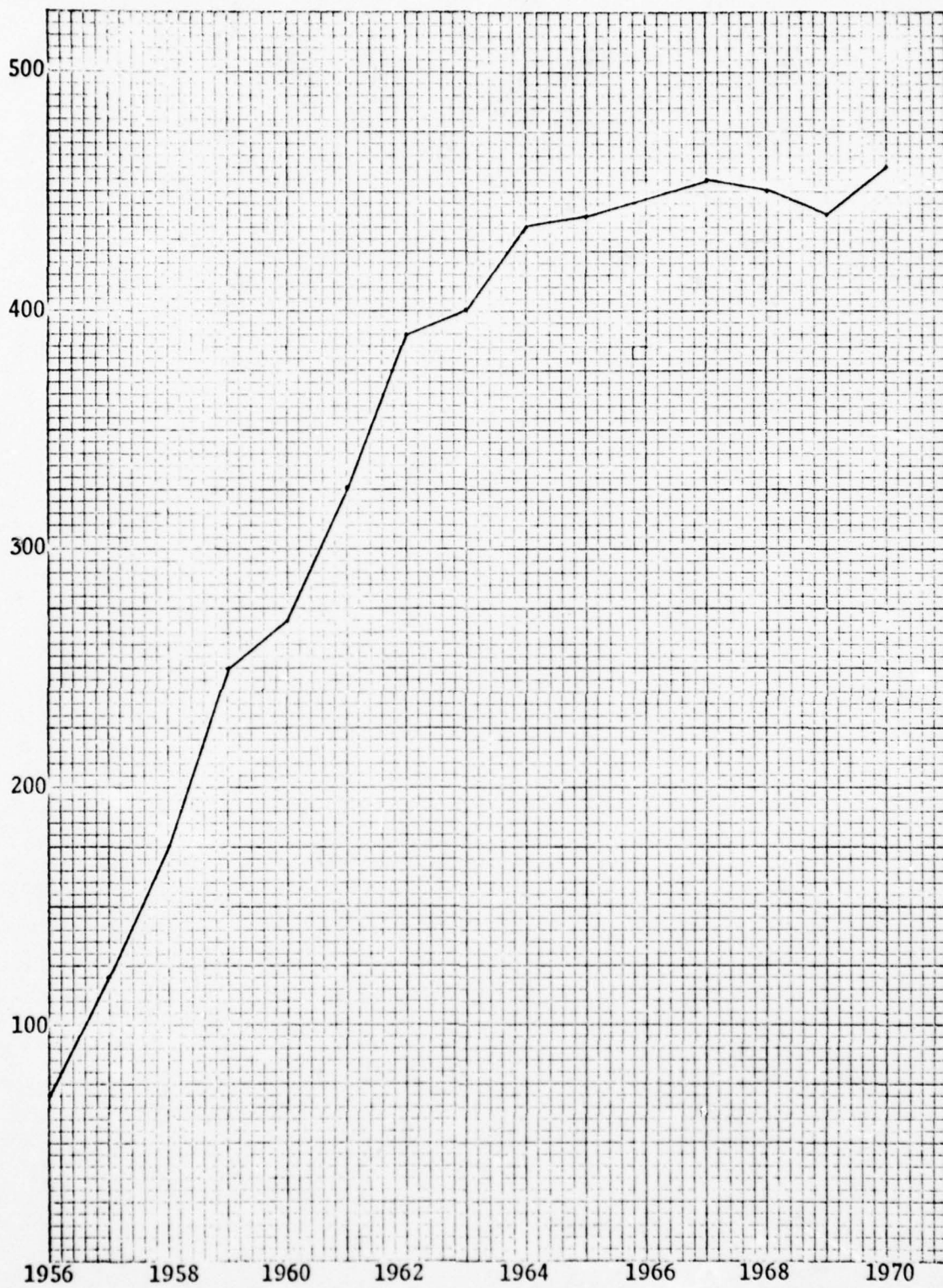


Fig. 16. Total armed forces personnel: FRG 1956-1970

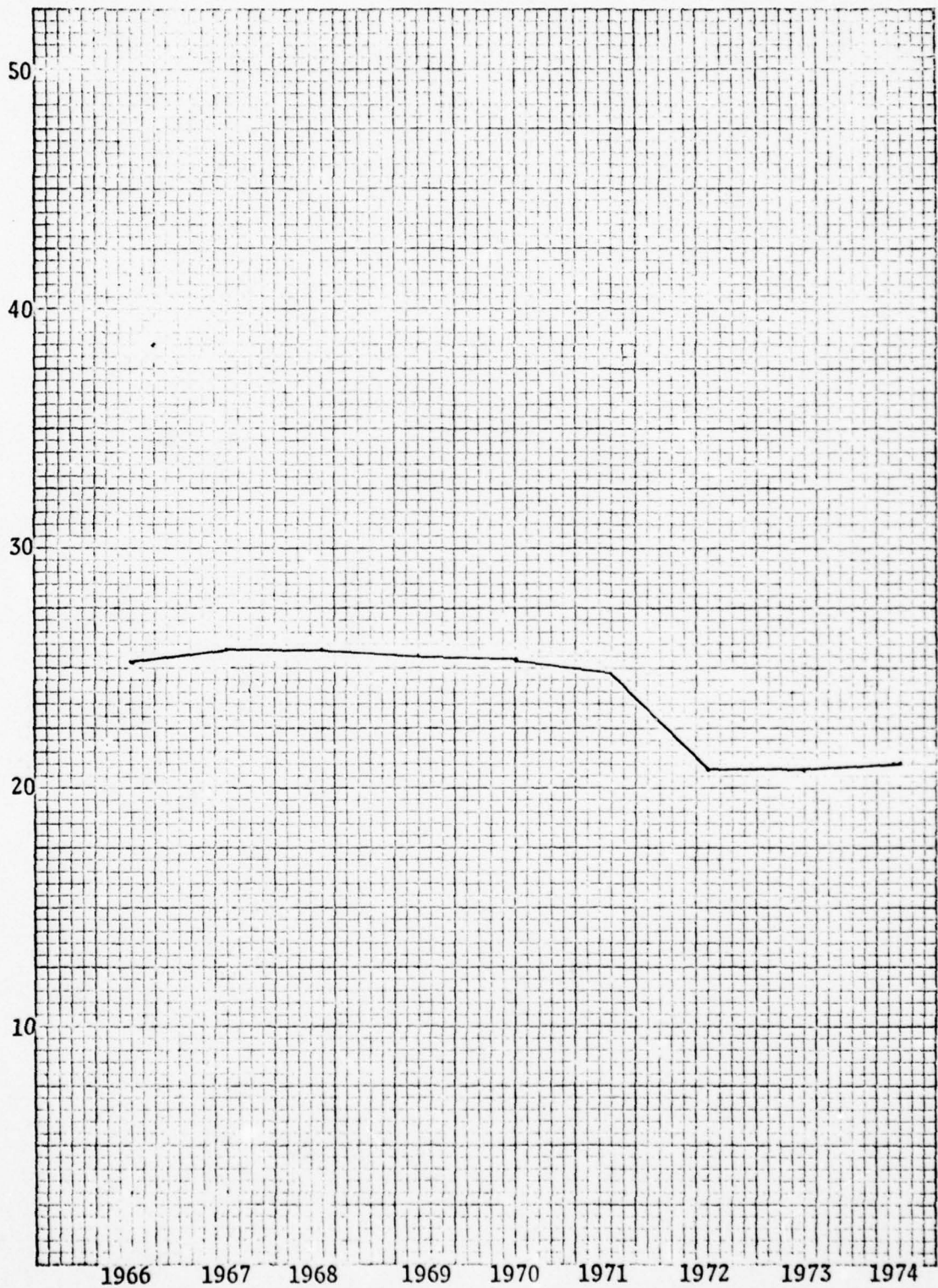
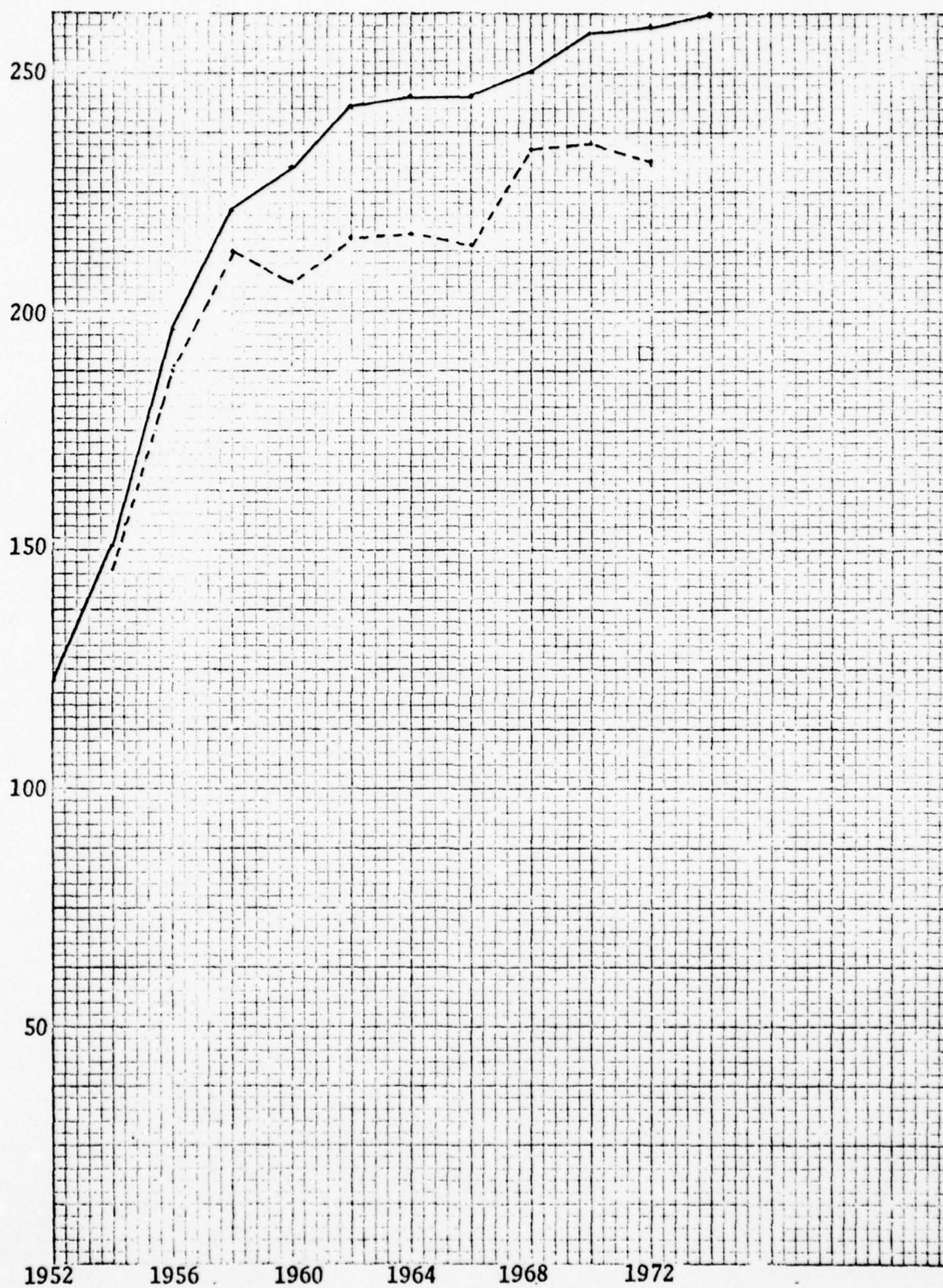


Fig. 17. Total armed forces personnel: Sweden 1966-1974



Fig. 18. Total armed forces personnel (authorized and actual): Japan 1952-1974



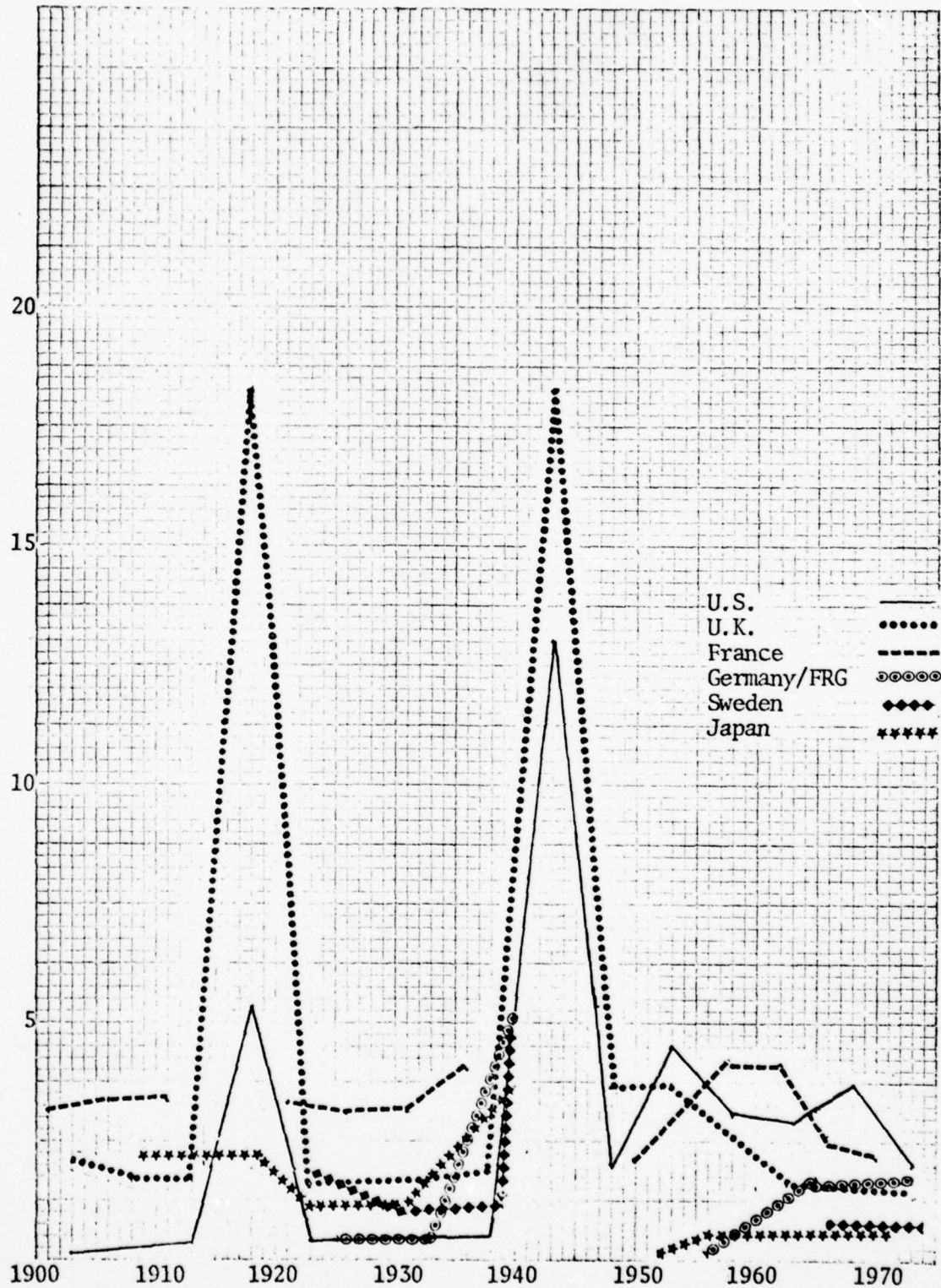


Fig. 19. Male MPR's: Six nations 1900-1974



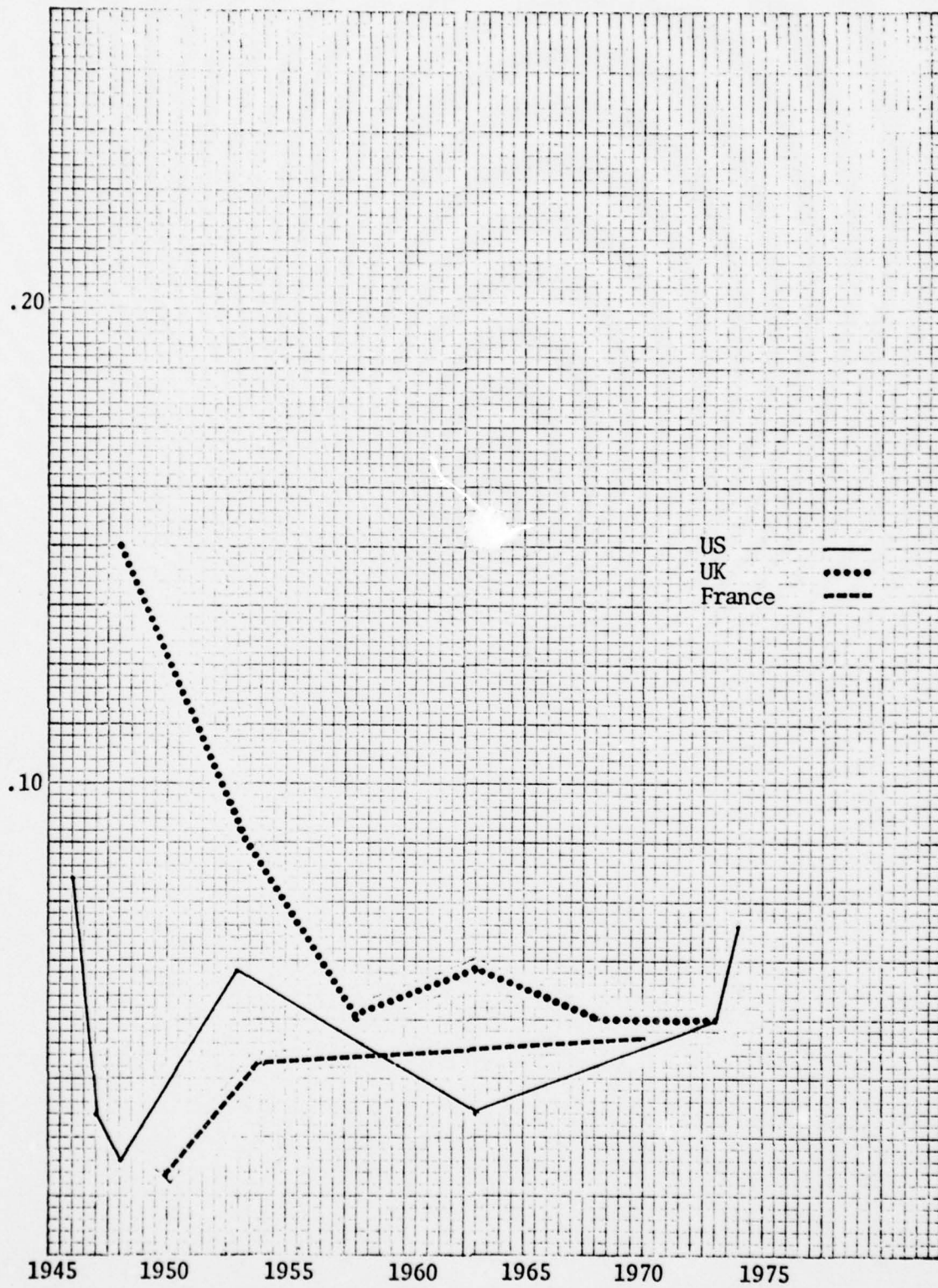


Fig. 20. Female MPR's: Three nations 1946-1974

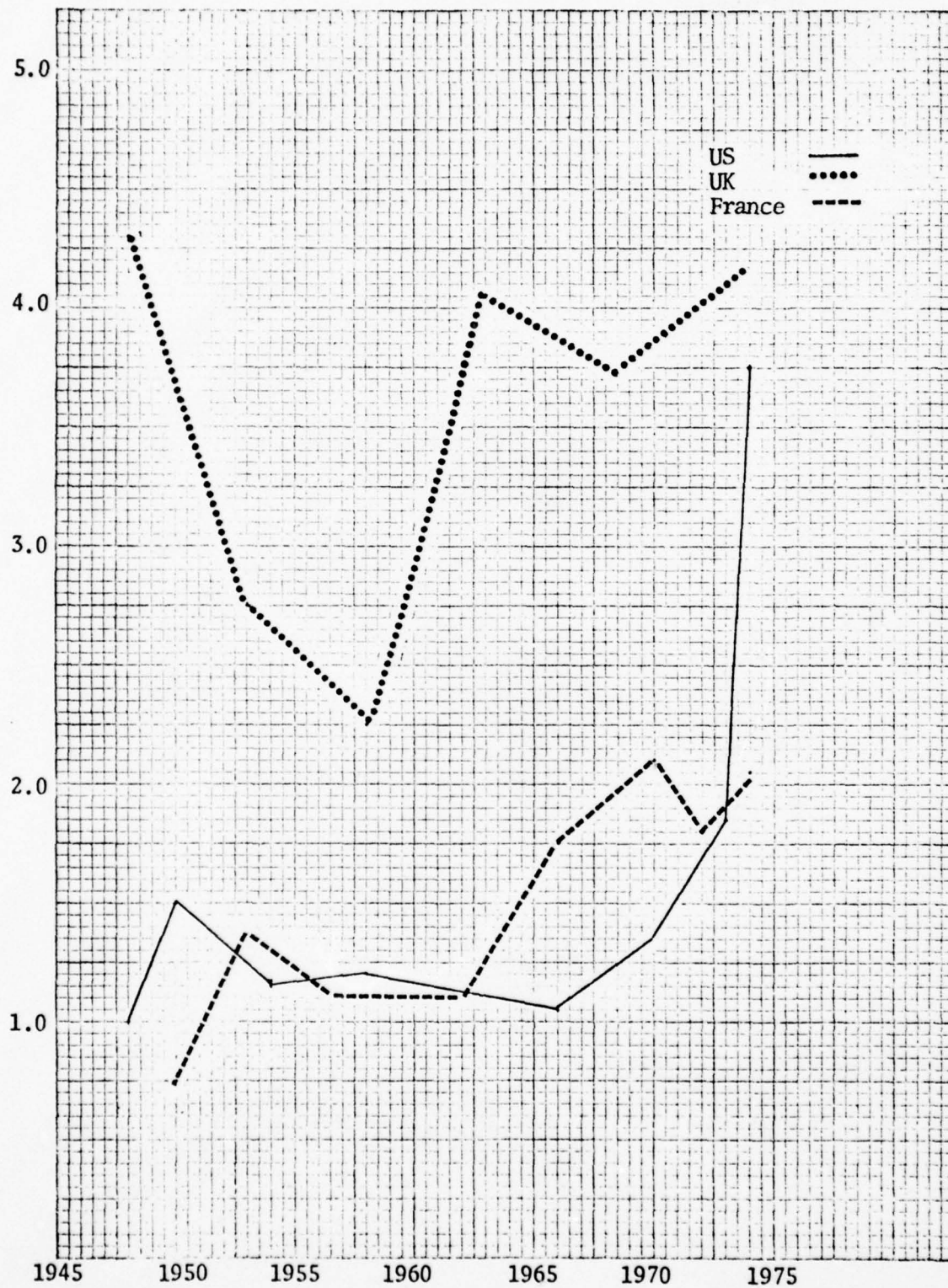


Fig. 21. Percent armed forces female: Three nations 1946-1974

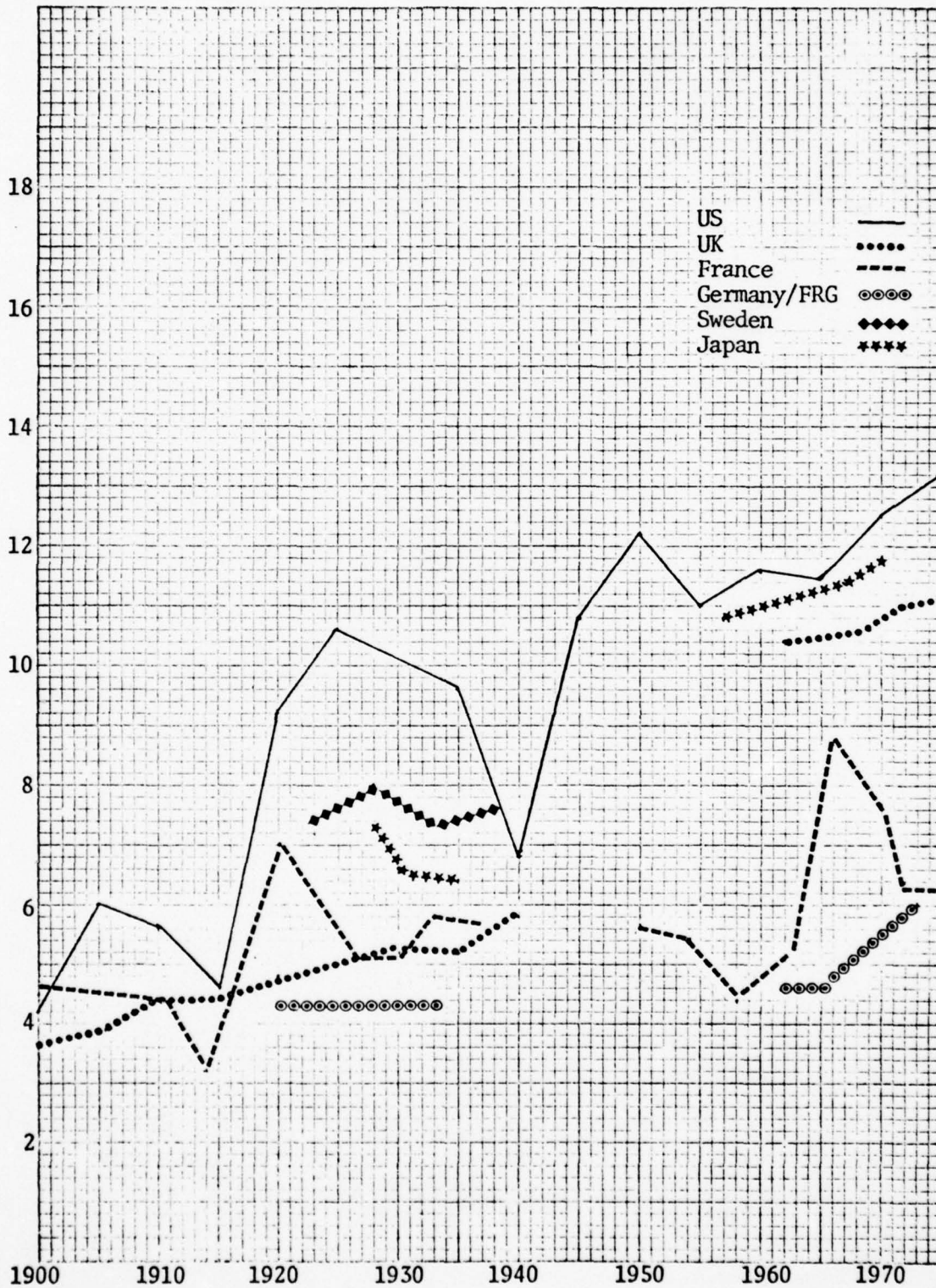


Fig. 22. Percent officer: Armies of six nations 1900-1975



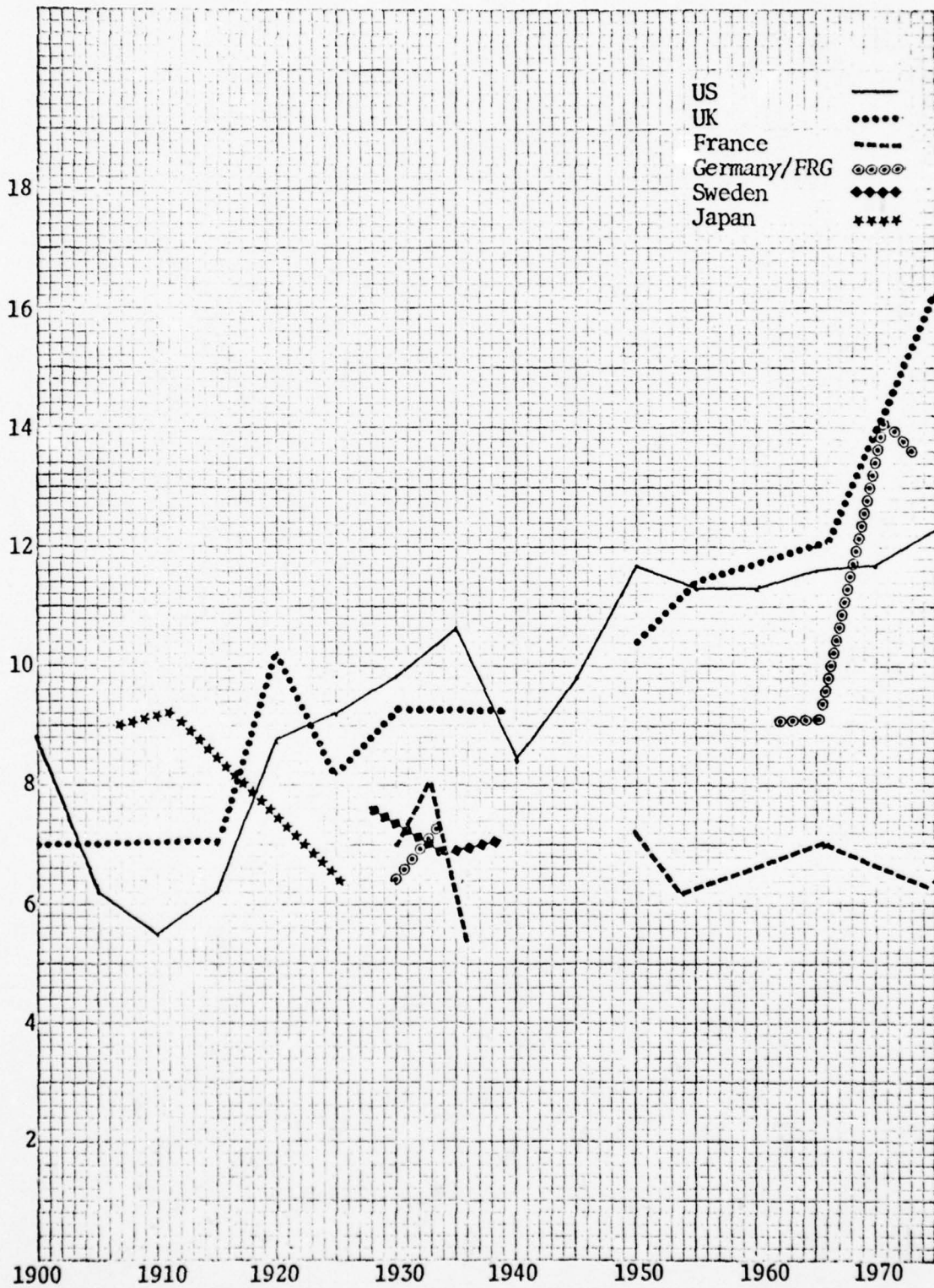


Fig. 23. Percent officer: Navies of six nations 1900-1975

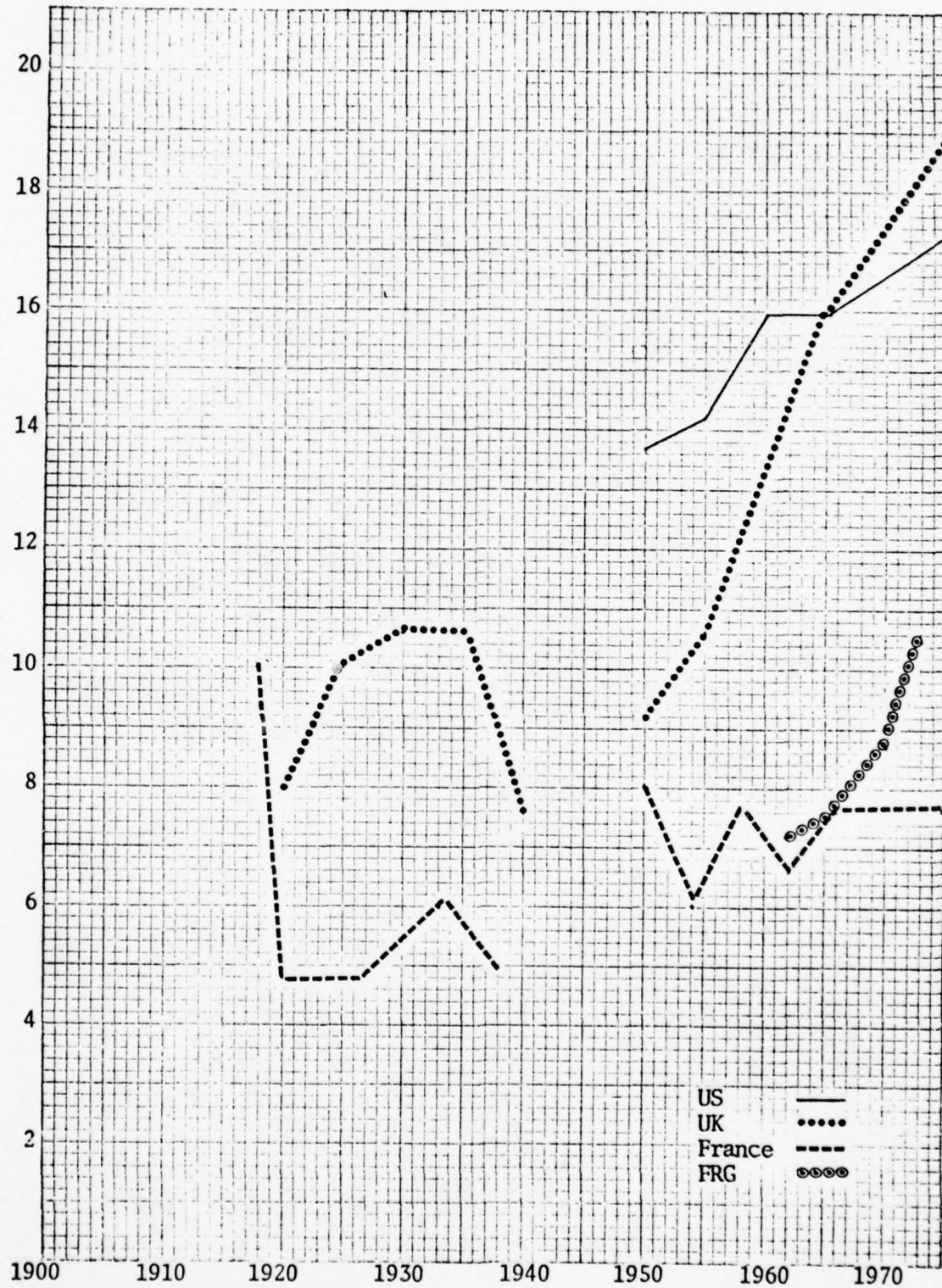


Fig. 24. Percent officer: Air forces of four nations 1914-1975

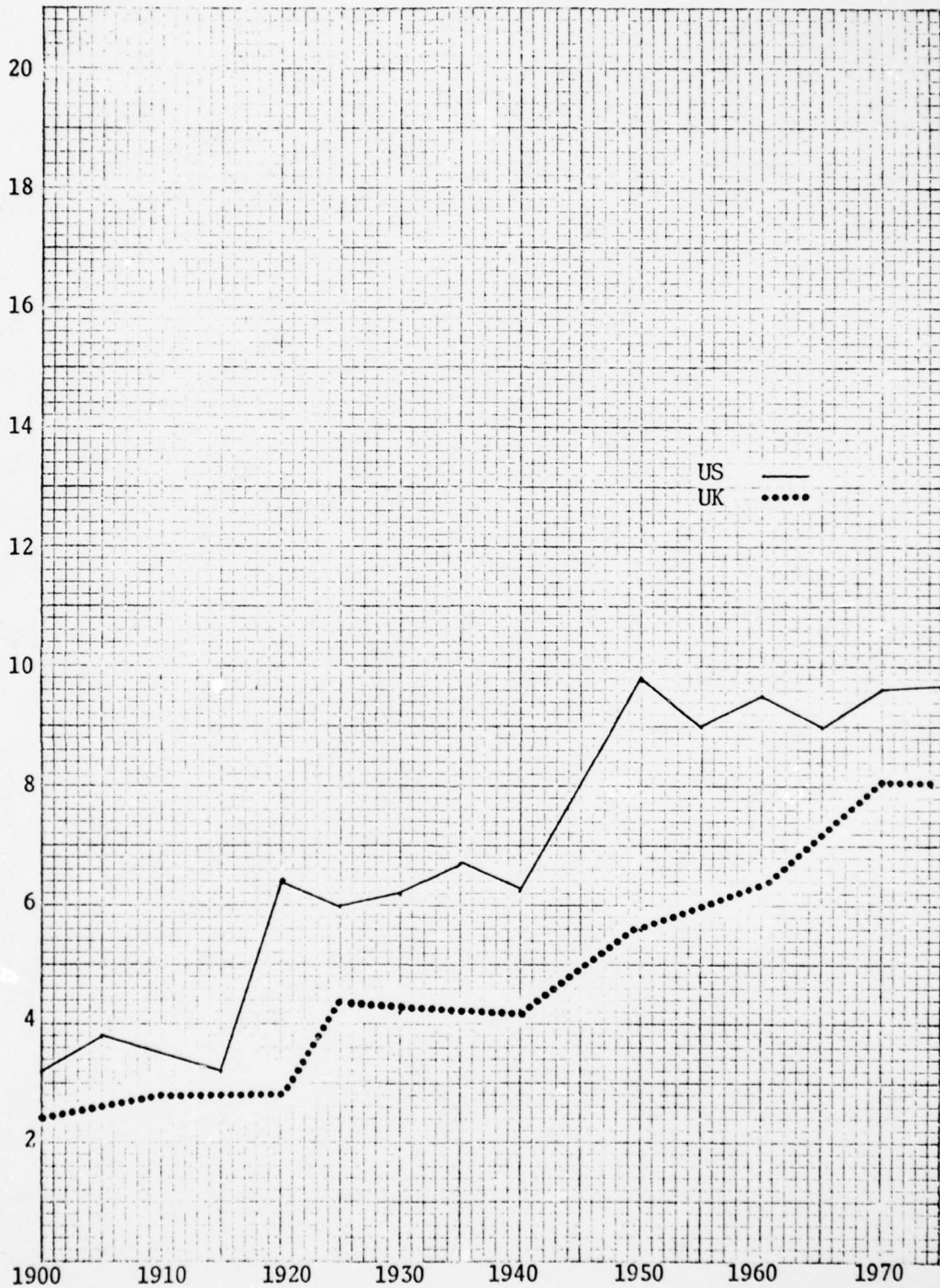


Fig. 25. Percent officers: U.S. and U.K. Marines 1900-1975



Fig. 26. Percent lower enlisted ranks and NCO's: Armies  
of six nations 1900-1975

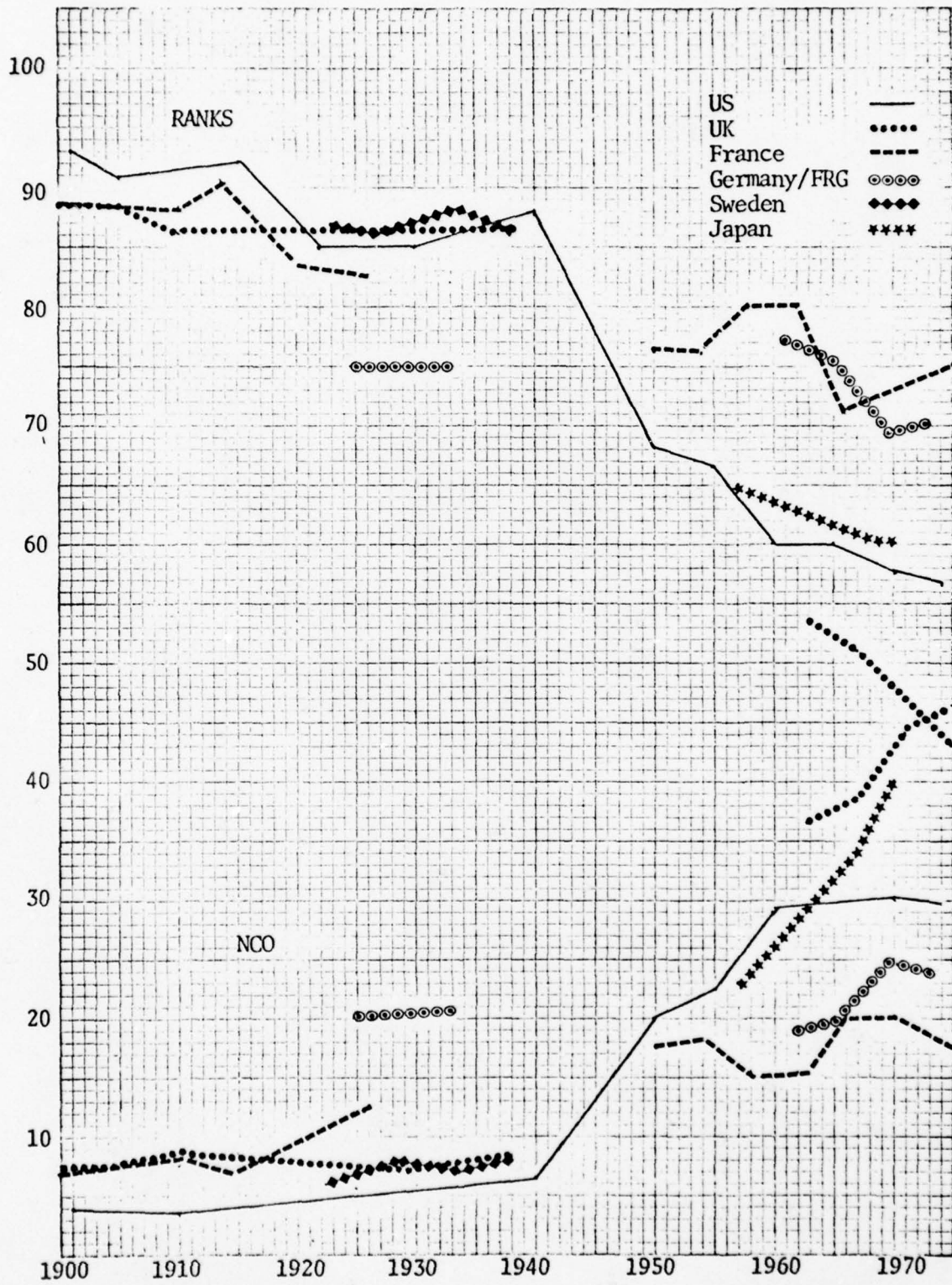


Fig. 27. Percent lower enlisted ranks and NCO's:  
Navies of four nations 1907-1975



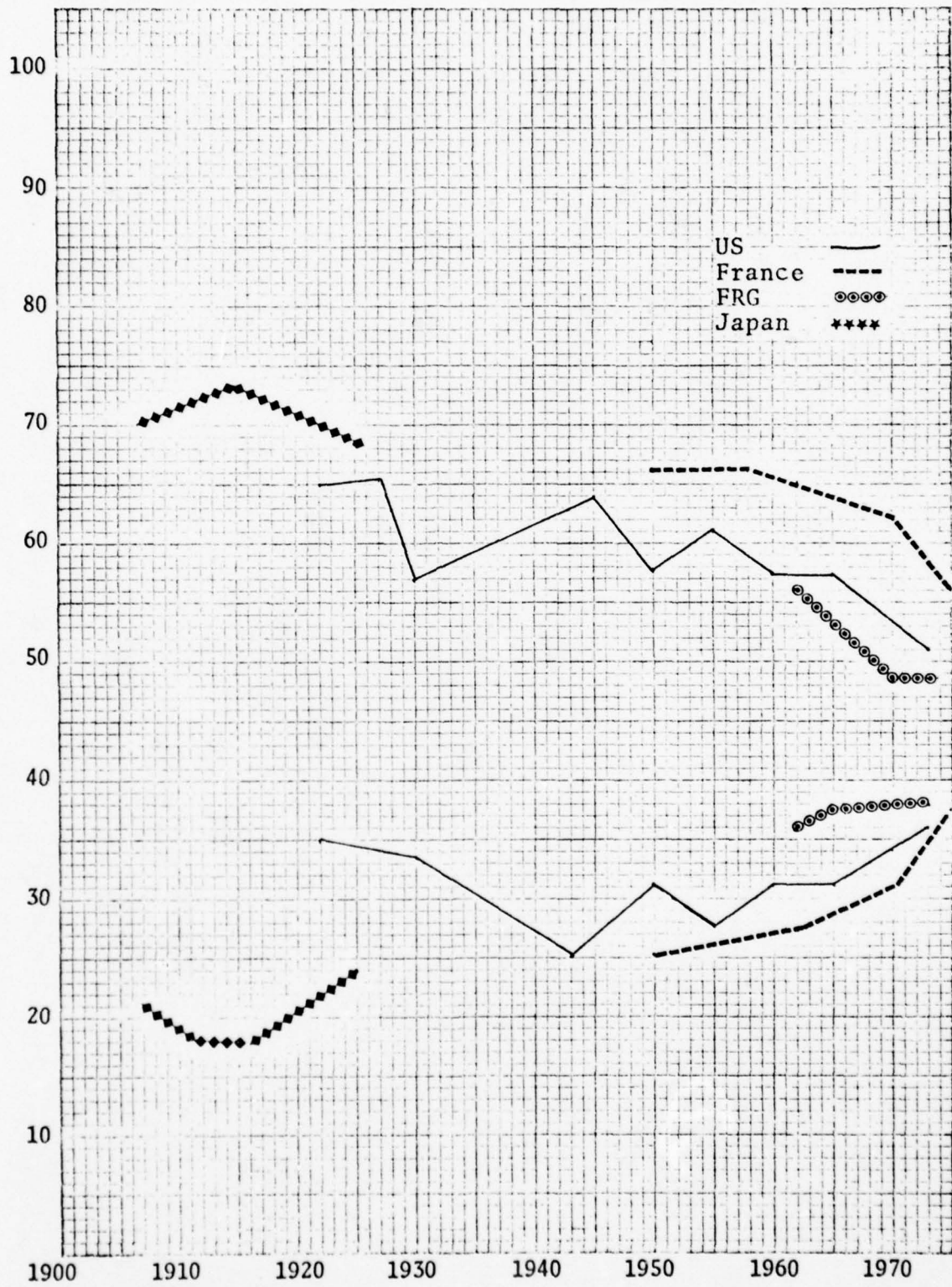


Fig. 28. Percent lower enlisted ranks and NCO's:  
Air forces of four nations 1914-1975

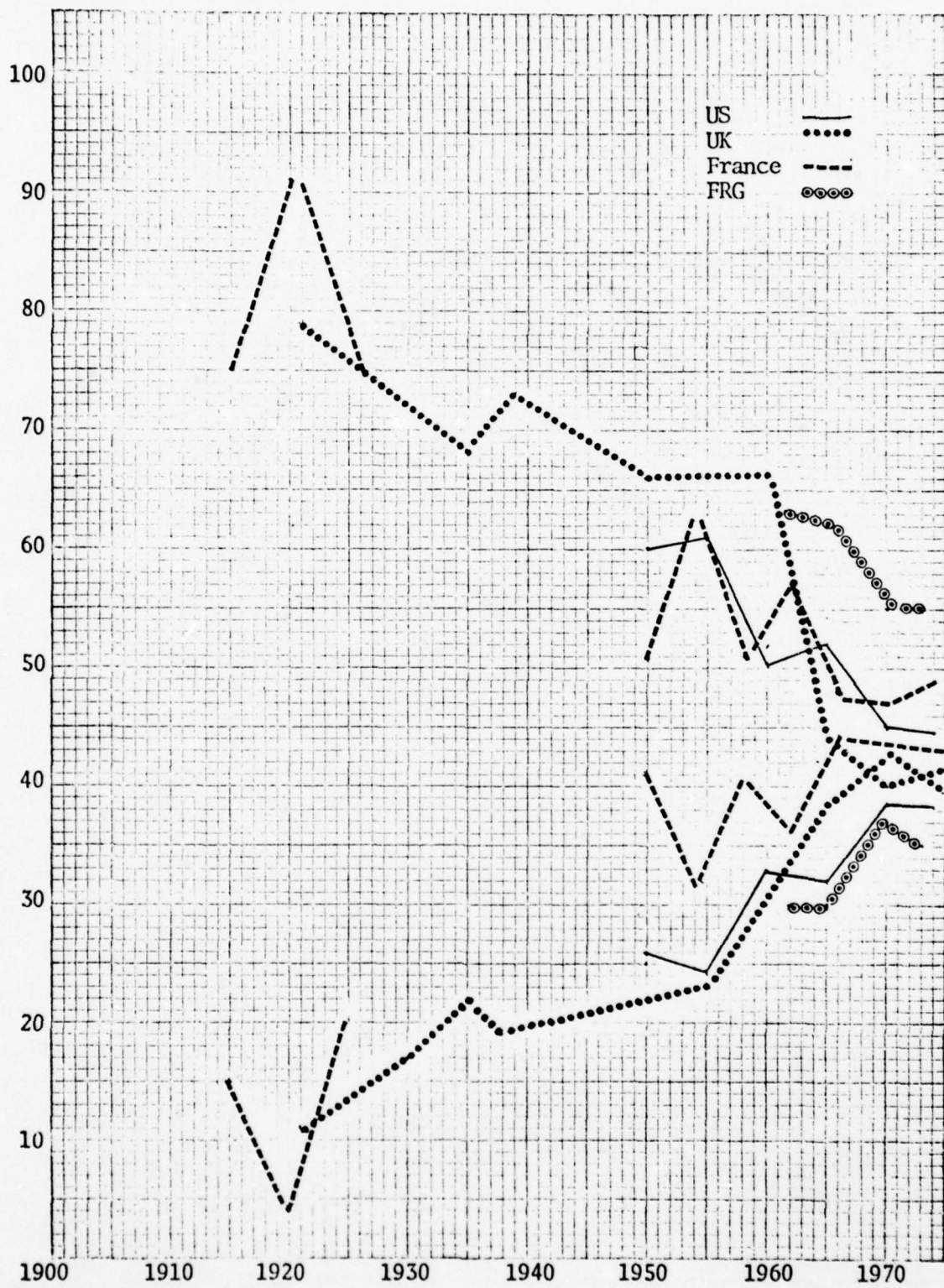




Fig. 29. Percent junior and senior officers:  
Armies of four nations 1900-1975

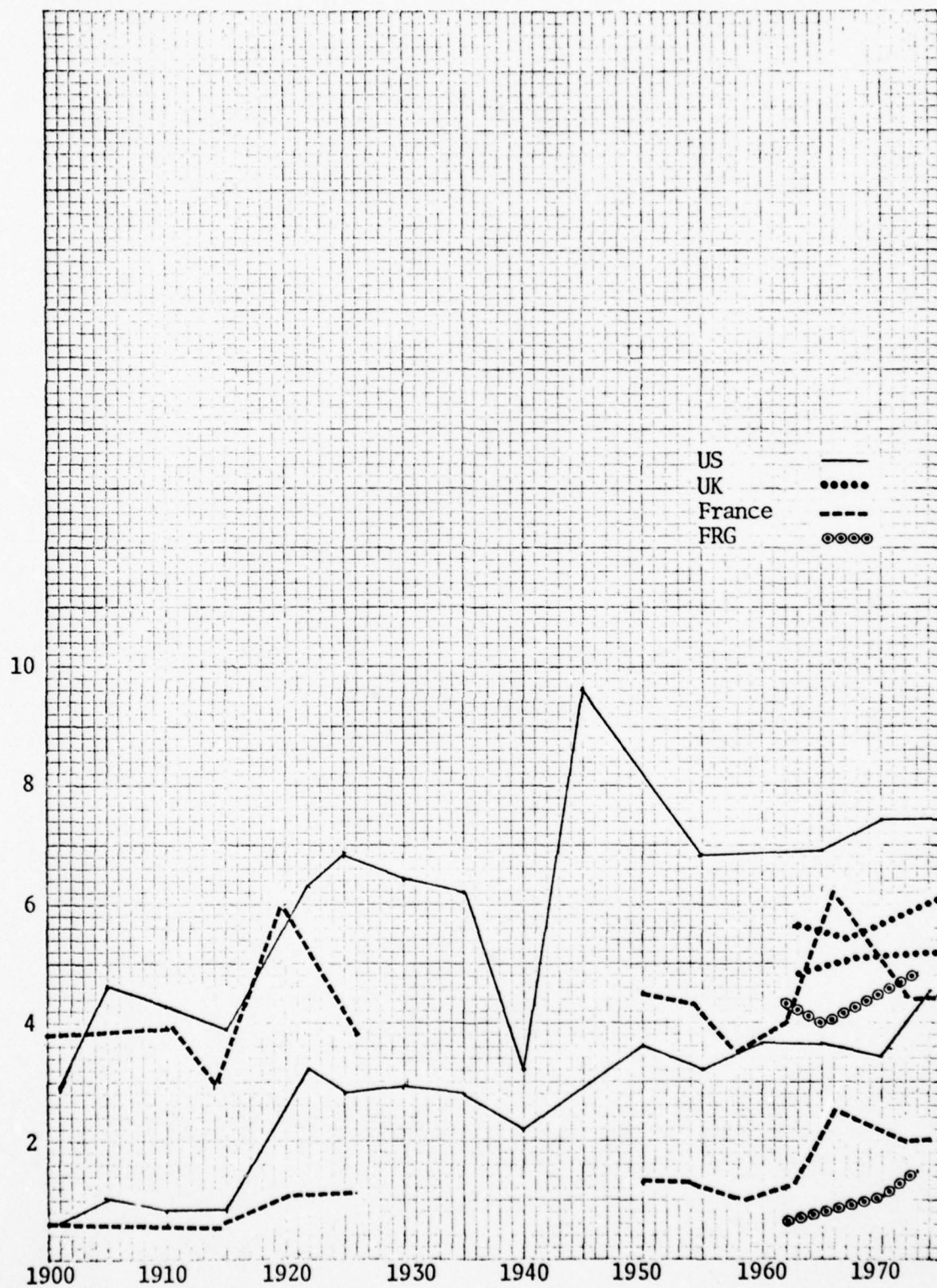


Fig. 30. Percent junior and senior officers: Navies  
of four nations 1930-1975



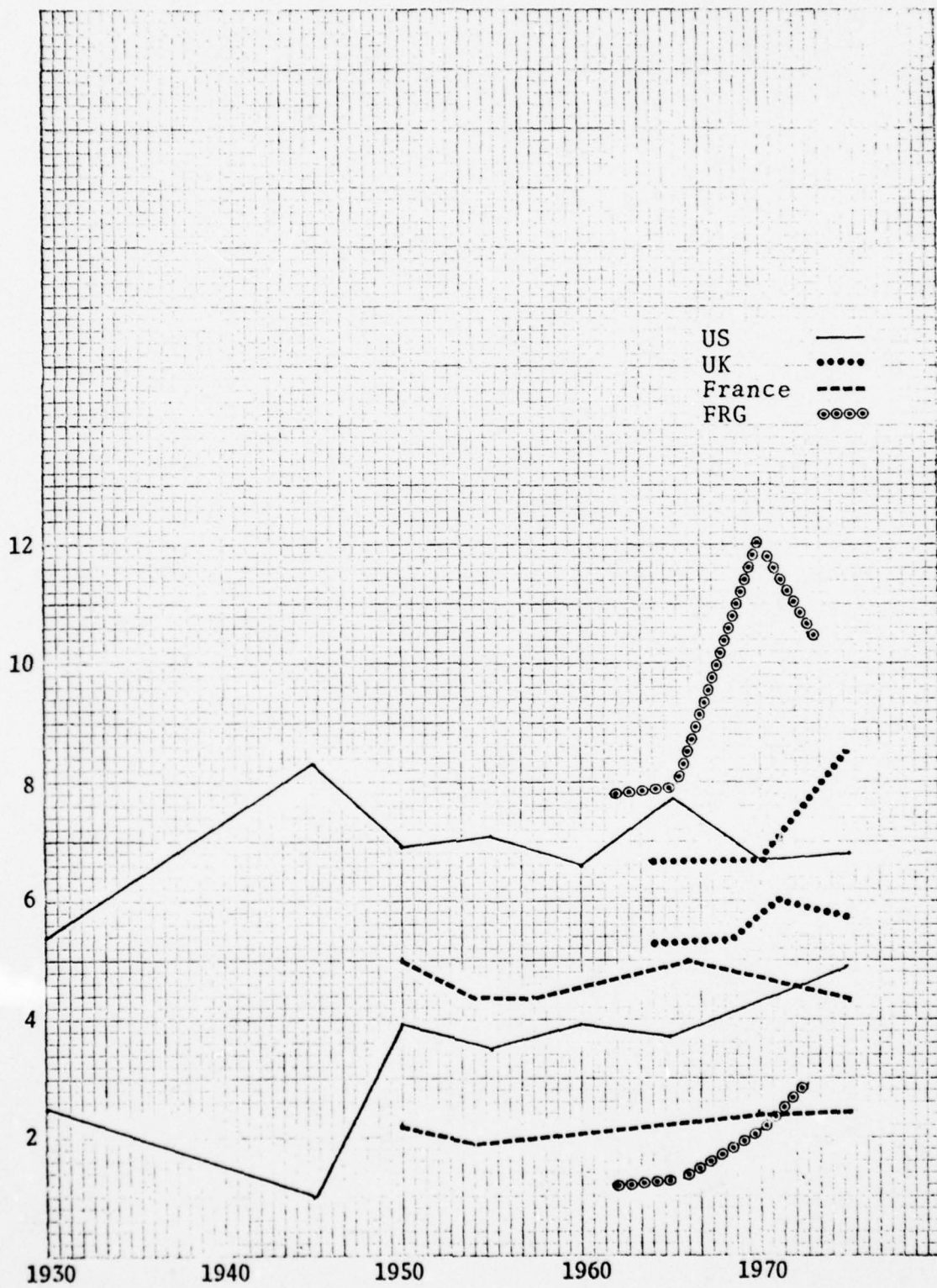
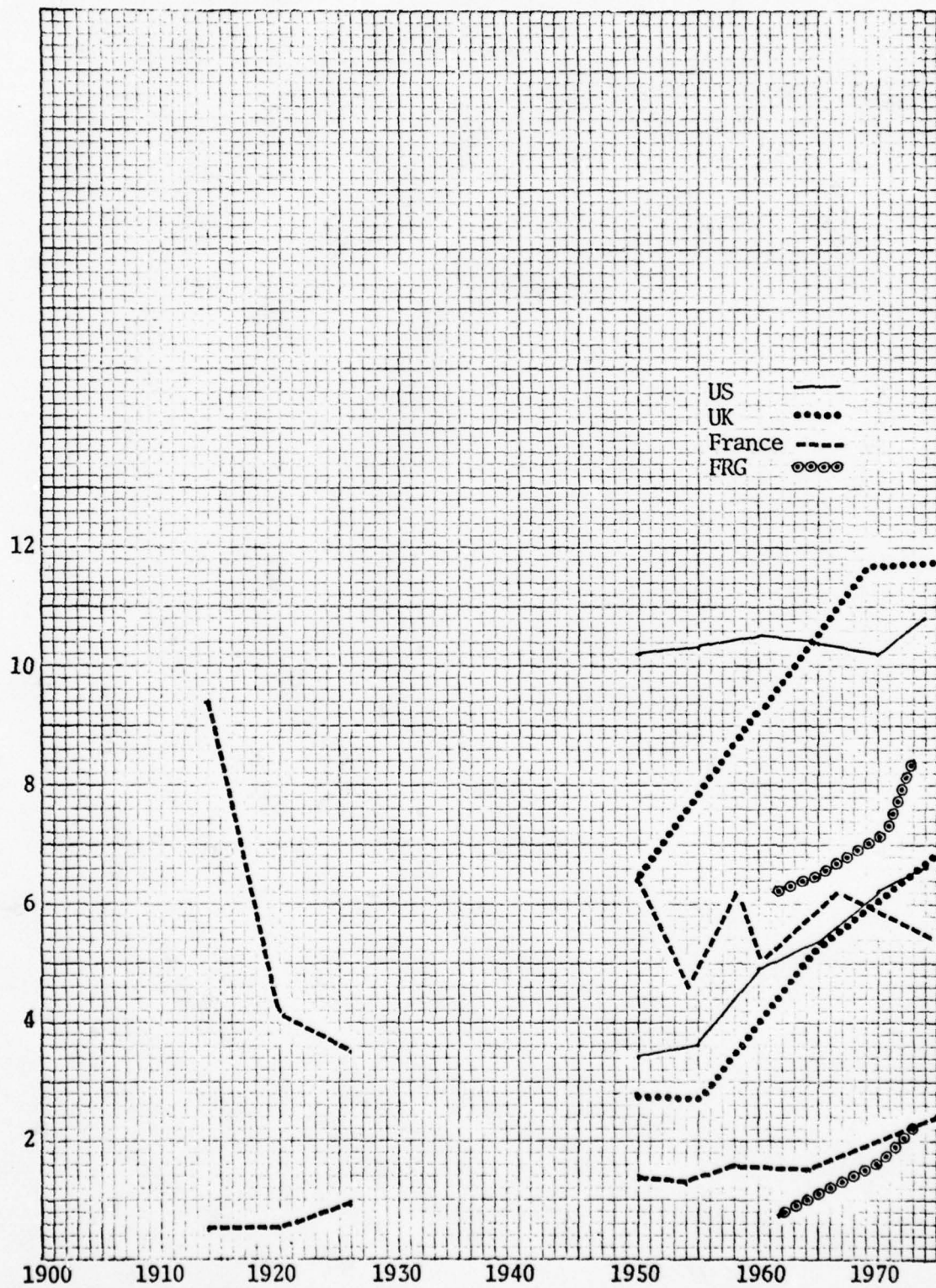


Fig. 31. Percent of junior and senior officers:  
Air Forces of four nations 1914-1975





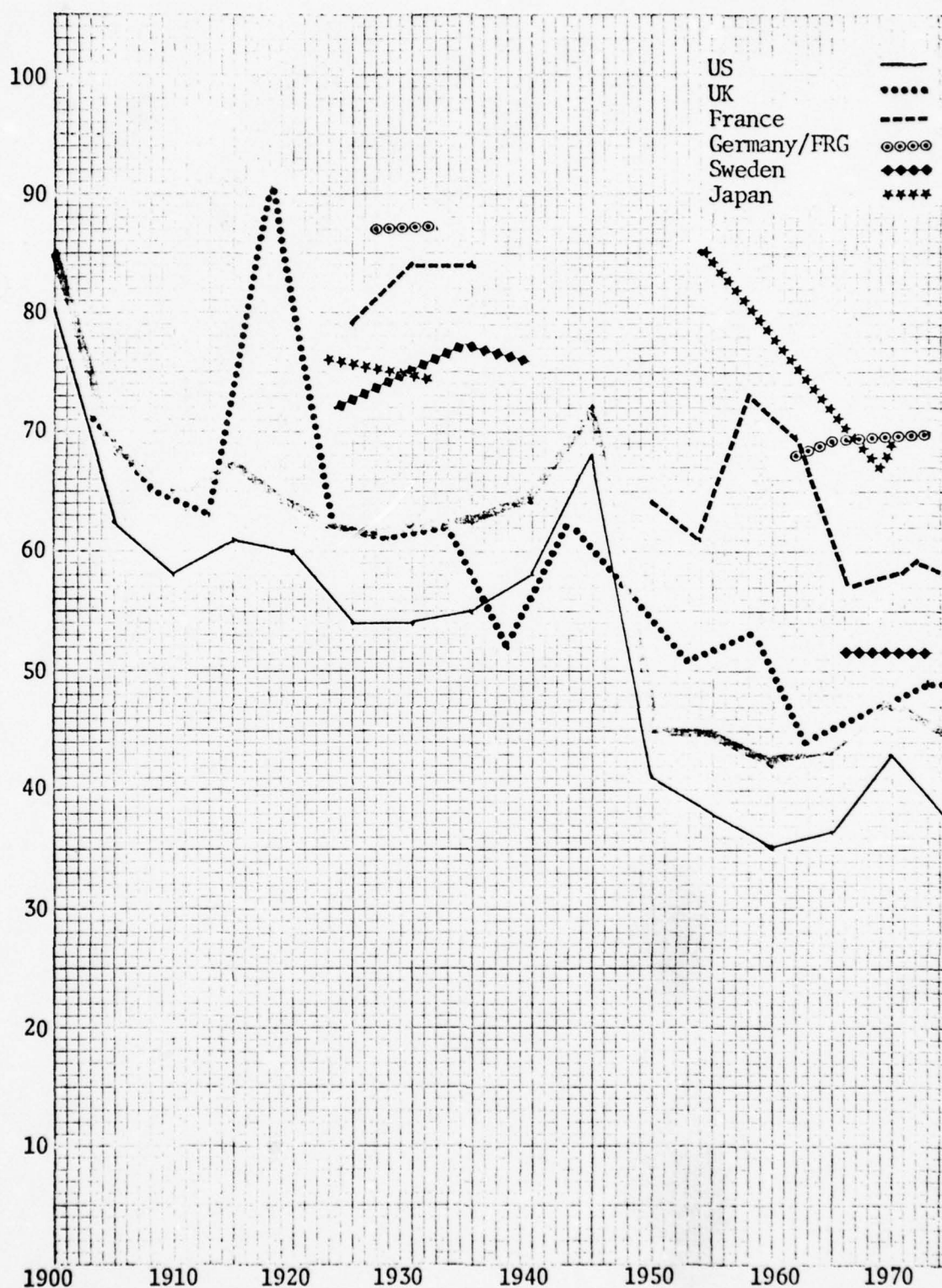


Fig. 32. Percent ground force: Armed forces of six nations 1900-1975

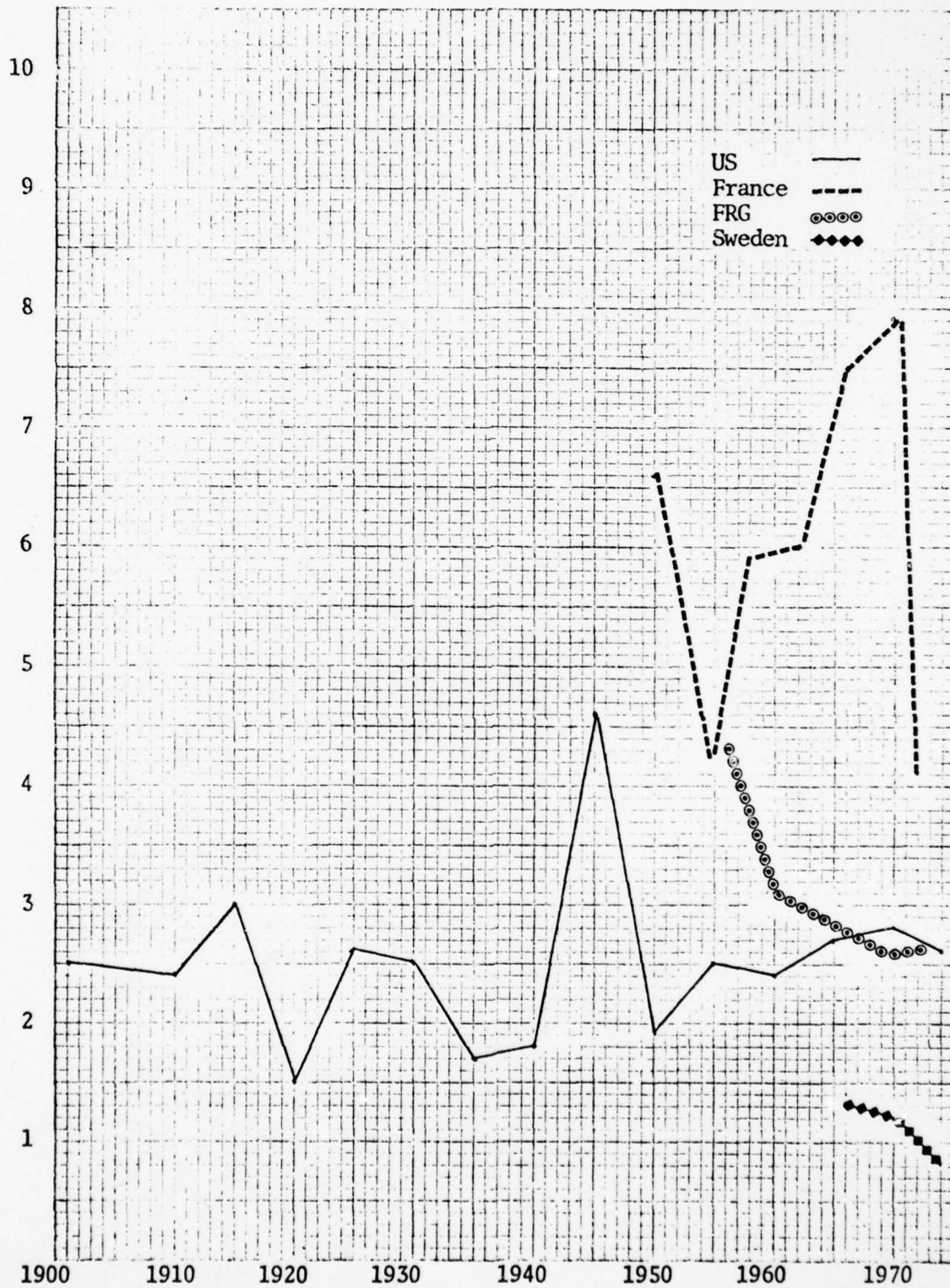


Fig. 33. Military/civilian personnel ratios: Four nations 1900-1974

APPENDIX C

TABLES



TABLE 1

TOTAL MILITARY PERSONNEL: U.S. ARMED FORCES 1900-1975

Year	Force Size	Year	Force Size	Year	Force Size
1975	2,129,000	1950	1,460,261	1924	261,189
1974	2,140,000	1949	1,615,360	1923	247,011
1973	2,252,000	1948	1,445,910	1922	270,207
1972	2,322,000	1947	1,582,999	1921	386,542
1971	2,714,000	1946	3,030,088	1920	343,302
1970	3,066,000	1945	12,123,455	1919	1,172,602
1969	3,459,423	1944	11,451,719	1918	2,897,167
1968	3,547,429	1943	9,044,745	1917	643,833
1967	3,376,511	1942	3,858,791	1916	179,376
1966	3,091,552	1941	1,801,101	1915	174,112
1965	2,653,142	1940	458,365	1914	165,919
1964	2,685,161	1939	334,473	1913	154,914
1963	2,697,689	1938	322,932	1912	153,174
1962	2,807,819	1937	311,808	1911	144,846
1961	2,483,771	1936	291,356	1910	139,344
1960	2,476,435	1935	251,799	1909	142,200
1959	2,504,310	1934	247,137	1908	128,500
1958	2,600,581	1933	243,845	1907	108,375
1957	2,795,798	1932	244,902	1906	112,216
1956	2,806,441	1931	252,605	1905	108,301
1955	2,935,107	1930	255,648	1904	110,129
1954	3,302,104	1929	255,031	1903	106,043
1953	3,555,067	1928	250,907	1902	111,145
1952	3,635,912	1927	248,943	1901	112,322
1951	3,249,455	1926	247,396	1900	125,923
		1925	251,756		

SOURCE: U.S. Bureau of the Census, Statistical Abstract of the United States, Washington, D.C. U.S. Bureau of the Census, Historical Statistics, Colonial Times to 1975, Washington, D.C.

TABLE 2  
RELATIVE FLUCTUATION IN THE SIZE OF U.S. ARMED FORCES  
FOR 5-YEAR INTERVALS, 1901-1970

Interval	Relative Fluctuation
1965-1970	44.7
1961-1965	18.9
1956-1960	16.6
1951-1955	154.9
1946-1950	152.7
1941-1945	574.1
1936-1940	66.9
1931-1935	7.9
1926-1930	5.0
1921-1925	60.6
1916-1920	742.2
1911-1915	22.9
1906-1910	38.3
1901-1905	22.0

TABLE 3

MALE POPULATION, MALES IN ARMED FORCES, AND MILITARY  
PARTICIPATION RATES: U.S. 1900-1974  
(Figures in Thousands)

Year	Male Population	Male Armed Forces	MPR
1974	102,945	2,065.0	2.01
1973	102,229	2,197.0	2.15
1972	101,450	2,278.7	2.25
1971	100,439	2,671.2	2.66
1970	98,912	3,024.5	3.06
1969	98,482	2,419.9	3.46
1968	97,542	3,509.0	3.60
1967	96,688	3,341.3	3.46
1966	95,969	3,059.0	3.19
1965	95,110	2,622.5	2.76
1964	93,935	2,655.4	2.83
1963	92,626	2,666.9	2.88
1962	92,117	2,775.6	3.01
1961	90,736	2,451.7	2.70
1960	88,331	2,444.9	2.77
1959	87,651	2,472.5	2.82
1958	86,195	2,569.8	2.98
1957	84,858	2,763.6	3.26
1956	83,399	2,772.8	3.32
1955	82,016	2,899.9	3.54
1954	80,656	3,263.5	4.05
1953	79,337	3,509.6	4.42
1952	78,104	3,590.0	4.60
1951	76,825	3,209.8	4.18
1950	75,530	1,438.2	1.90
1949	74,335	1,597.3	2.15
1948	73,130	1,431.4	1.96
1947	71,946	1,563.2	2.17
1946	70,631	2,972.1	4.21
1945	70,035	11,858.4	16.93
1944	69,378	11,241.2	16.20
1943	68,546	8,918.6	13.01
1942	67,597	3,844.5	5.69
1941	66,920	1,795.0	2.68
1940	66,352	458.4	0.69
1939	65,713	334.5	0.51
1938	65,235	322.9	0.50
1937	64,790	311.8	0.48
1936	64,459	291.4	0.45
1935	64,110	251.8	0.39
1934	63,726	247.1	0.39
1933	63,384	243.8	0.38
1932	63,070	244.9	0.39
1931	62,726	252.6	0.40
1930	62,297	255.6	0.41



TABLE 3--Continued

Year	Male Population	Male Armed Forces	MPR
1929	61,684	255.0	0.41
1928	61,100	250.9	0.41
1927	60,402	248.9	0.41
1926	59,590	247.4	0.42
1925	58,820	251.8	0.43
1924	57,987	261.2	0.45
1923	56,864	247.0	0.43
1922	55,891	270.2	0.48
1921	55,292	386.5	0.70
1920	54,295	343.3	0.63
1919	53,107	1,172.6	2.21
1918	51,968	2,897.2	5.57
1917	52,786	643.8	1.22
1916	52,238	179.4	0.34
1915	51,572	174.1	0.34
1914	50,889	165.9	0.33
1913	49,961	154.9	0.31
1912	49,020	153.2	0.31
1911	48,292	144.8	0.30
1910	47,554	139.3	0.29
1909	46,546	142.2	0.31
1908	45,595	128.5	0.28
1907	44,679	108.4	0.24
1906	43,836	112.2	0.26
1905	42,968	108.3	0.25
1904	42,082	110.1	0.26
1903	41,263	106.0	0.26
1902	40,480	111.1	0.27
1901	39,649	112.3	0.28
1900	38,869	125.9	0.32

SOURCE: Statistical Abstract, Historical Statistics.

TABLE 4

BREAKDOWN OF WORKING POPULATION AND ARMED FORCES AS  
 PERCENT OF WORKING POPULATION: U.S. 1929-1975  
 (Figures in Thousands)

Year	Civilian Employed	Armed Forces	Unemployed	Working Population	Armed Forces As % Working Population
1975	83,549	2,129	7,820	93,498	2.28
1974	85,936	2,140	5,076	93,152	2.30
1973	84,409	2,252	4,304	90,960	2.48
1972	81,702	2,322	4,840	88,864	2.61
1971	79,120	2,714	4,993	86,827	3.13
1970	78,627	3,066	4,088	85,781	3.57
1969	77,902	3,459	2,831	84,192	4.11
1968	75,920	3,547	2,817	82,284	4.31
1967	74,372	3,377	2,975	80,724	4.18
1966	72,895	3,092	2,875	78,862	3.92
1965	71,089	2,653	3,366	77,108	3.44
1964	70,357	2,685	3,876	76,918	3.49
1963	68,809	2,698	4,166	75,673	3.57
1962	67,847	2,808	4,007	74,662	3.76
1961	66,797	2,484	4,806	74,087	3.35
1960	66,681	2,476	3,931	73,088	3.39
1959	65,581	2,504	3,813	71,898	3.48
1958	63,966	2,601	4,681	71,248	3.65
1957	65,010	2,796	2,936	70,742	3.95
1956	64,979	2,806	2,551	70,336	3.99
1955	63,193	2,935	2,654	68,782	4.27
1954	61,238	3,302	3,230	67,770	4.87
1953	62,213	3,555	1,602	67,370	5.28
1952	61,293	3,636	1,673	66,602	5.46
1951	61,005	3,249	1,879	66,133	4.91
1950	59,957	1,460	3,142	64,559	2.26
1949	58,710	1,615	3,395	63,720	2.54
1948	59,378	1,446	2,064	62,888	2.30
1947	58,026	1,583	2,142	61,751	2.56
1946	55,250	3,030	2,270	60,550	5.00
1945	52,820	12,123	1,040	65,983	18.37
1944	53,960	11,452	670	66,082	17.33
1943	54,470	9,045	1,070	64,585	14.00
1942	53,750	3,859	2,660	60,269	6.40
1941	50,350	1,801	5,560	57,711	3.12
1940	47,520	458	8,120	56,098	0.82
1939	45,750	334	9,480	55,564	0.60
1938	44,220	323	10,390	54,933	0.59
1937	46,300	312	7,700	54,312	0.57
1936	44,410	291	9,030	53,731	0.54
1935	42,260	252	10,610	53,122	0.47

TABLE 4--Continued

Year	Civilian Employed	Armed Forces	Unemployed	Working Population	Armed Forces As % Working Population
1934	40,890	247	11,340	52,477	0.47
1933	38,760	244	12,830	51,834	0.47
1932	38,940	245	12,060	51,245	0.48
1931	42,400	253	8,020	50,673	0.50
1930	45,480	256	4,340	50,000	0.51
1929	47,630	255	1,550	49,435	0.52

SOURCE: Statistical Abstract, Historical Statistics.



TABLE 5

FEMALE POPULATION, FEMALE ARMED FORCES, PERCENT  
FEMALE AND FEMALE MPR: U.S. 1941-1974

Year	Female Population	Female Personnel	% Female	MPR
1974	108,446	75.0	3.52	0.07
1973	107,622	55.0	2.44	.05
1972	106,782	43.3	1.86	.04
1971	105,791	42.8	1.58	.04
1970	104,300	41.5	1.35	.04
1969	103,439	39.5	1.14	.04
1968	102,304	38.4	1.08	.04
1967	101,171	35.2	1.04	.03
1966	99,967	32.6	1.05	.03
1965	98,704	30.6	1.15	.03
1964	97,399	29.8	1.11	.03
1963	95,905	30.8	1.14	.03
1962	94,473	32.2	1.15	.03
1961	92,907	32.1	1.29	.03
1960	90,992	31.5	1.27	.03
1959	89,452	31.8	1.27	.04
1958	87,858	31.2	1.20	.04
1957	86,371	32.2	1.15	.04
1956	84,775	33.6	1.20	.04
1955	83,255	35.2	1.20	.04
1954	81,761	38.6	1.17	.05
1953	80,299	45.5	1.28	.06
1952	78,923	45.9	1.26	.06
1951	77,536	39.6	1.22	.05
1950	76,153	22.1	1.51	.03
1949	74,853	18.1	1.12	.02
1948	73,502	14.5	1.00	.02
1947	72,180	19.6	1.24	.03
1946	70,757	58.0	1.91	.08
1945	69,893	265.0	2.19	.38
1944	69,020	210.5	1.84	.30
1943	68,194	126.2	1.40	.19
1942	67,263	14.3	.37	.02
1941	66,482	6.1	.33	0.01

SOURCE: Statistical Abstract, and William Zierdt from Department of Defense Records.

TABLE 6  
CORRELATIONS (R's) AND SLOPES (B's) FOR RANK PERCENTAGES  
OVER TIME: U.S. ARMY 1900-1974

Rank	# of Cases	R	Slope
O-10	48	.514	.1571 * 10 <sup>-6</sup>
O-9	44	.644	.434 * 10 <sup>-6</sup>
O-8	69	.502	.139 * 10 <sup>-5</sup>
O-7	69	-.403	-.186 * 10 <sup>-5</sup>
O-6	69	.705	.006 * 10 <sup>-2</sup>
O-5	69	.879	.019 * 10 <sup>-2</sup>
O-4	69	.637	.019 * 10 <sup>-2</sup>
O-3	69	.564	.025 * 10 <sup>-2</sup>
O-2	69	.194*	.008 * 10 <sup>-2</sup>
O-1	69	.414	.012 * 10 <sup>-2</sup>
E-9	16	.887	.022 * 10 <sup>-2</sup>
E-8	17	.870	.075 * 10 <sup>-2</sup>
E-7	53	.894	.103 * 10 <sup>-2</sup>
E-6	69	.804	.011 * 10 <sup>-1</sup>
E-5	69	.915	.022 * 10 <sup>-1</sup>
E-4	69	.860	.023 * 10 <sup>-1</sup>
E-3	69	.586	.057 * 10 <sup>-2</sup>
E-2	69	.092*	.009 * 10 <sup>-2</sup>
E-1	69	-.920	-.010

SOURCE: William Zierdt.

\* in the R column indicates that the coefficient is not significant at the .001 level of statistical significance.

TABLE 7  
CORRELATIONS (R's) AND SLOPES (B's) FOR RANK PERCENTAGES  
OVER TIME: U.S. NAVY 1942-1974

Rank	# of Cases	R	Slope
O-10	31	.372*	.157 * 10 <sup>-6</sup>
O-9	31	.685	.128 * 10 <sup>-5</sup>
O-8	31	.191*	.263 * 10 <sup>-5</sup>
O-7	15	.488*	.281 * 10 <sup>-5</sup>
O-6	31	.662	.011 * 10 <sup>-2</sup>
O-5	31	.747	.025 * 10 <sup>-2</sup>
O-4	31	.868	.043 * 10 <sup>-2</sup>
O-3	31	.616	.032 * 10 <sup>-2</sup>
O-2	31	-.499*	-.030 * 10 <sup>-2</sup>
O-1	31	-.452*	-.036 * 10 <sup>-2</sup>
E-9	16	.933	.038 * 10 <sup>-2</sup>
E-8	16	.890	.070 * 10 <sup>-2</sup>
E-7	31	-.490*	-.001
E-6	31	.874	.002
E-5	31	.815	.003
E-4	31	.292*	.001
E-3	31	-.300*	.006 * 10 <sup>-1</sup>
E-2	31	-.614	-.001
E-1	31	-.38937*	-.001

SOURCE: William Zierdt.

\* in the R column indicates that the coefficient is not significant at the .001 level of statistical significance.



TABLE 8

CORRELATIONS (R's) AND SLOPES (B's) RANK PERCENTAGES  
OVER TIME: U.S. AIR FORCE 1948-1974

Rank	# of Cases	R	Slope
O-10	26	.908	.533 * $10^{-6}$
O-9	26	.921	.157 * $10^{-5}$
O-8	26	.572	.229 * $10^{-5}$
O-7	26	.603	.219 * $10^{-5}$
O-6	26	.979	.002 * $10^{-1}$
O-5	26	.973	.006 * $10^{-1}$
O-4	26	.931	.068 * $10^{-2}$
O-3	26	.844	.099 * $10^{-2}$
O-2	26	-.820	-.001
O-1	26	.040*	.003 * $10^{-2}$
E-9	15	.824	.034 * $10^{-2}$
E-8	16	.895	.059 * $10^{-2}$
E-7	26	.205*	.021 * $10^{-2}$
E-6	26	.939	.002
E-5	26	.868	.003
E-4	26	.829	.003
E-3	26	-.389*	-.058 * $10^{-2}$
E-2	26	-.822	-.002
E-1	26	-.742	-.002

SOURCE: William Zierdt.

\* in the R column indicates that the coefficient is not significant at the .001 level of statistical significance.

TABLE 9

CORRELATIONS (R's) AND SLOPES (B's) FOR RANK PERCENTAGES  
OVER TIME: U.S. MARINE CORPS 1944-74

Rank	# of Cases	R	Slope
O-10	28	-.067*	-.333 * 10 <sup>-7</sup>
O-9	29	.546	.529 * 10 <sup>-6</sup>
O-8	29	-.083*	-.287 * 10 <sup>-6</sup>
O-7	29	-.354*	-.256 * 10 <sup>-5</sup>
O-6	29	.421*	.003 * 10 <sup>-2</sup>
O-5	29	.338*	.006 * 10 <sup>-2</sup>
O-4	29	.755	.022 * 10 <sup>-2</sup>
O-3	29	.573	.025 * 10 <sup>-2</sup>
O-2	29	-.030*	-.002 * 10 <sup>-2</sup>
O-1	29	.024*	.001 * 10 <sup>-2</sup>
E-9	17	.859	.032 * 10 <sup>-2</sup>
E-8	17	.886	.066 * 10 <sup>-2</sup>
E-7	29	-.230*	-.022 * 10 <sup>-2</sup>
E-6	29	.782	.001
E-5	29	.924	.003
E-4	29	.586	.002
E-3	29	.078*	.001 * 10 <sup>-1</sup>
E-2	29	-.821	-.006
E-1	29	.363*	.002

SOURCE: William Zierdt.

\* in the R column indicates that the coefficient is not significant at the .001 level of statistical significance.

TABLE 10  
ANALYSIS OF SELECTED TRANSITION RANKS

Branch of Service	Rank	Time Period	# of Cases	R	Significant at .001?
Army	E-2	1900-1974	69	.126	No
Army	E-2	1900-1945	40	.830	Yes
Army	E-2	1945-1974	30	-.799	Yes
Army	E-3	1900-1974	69	.607	Yes
Army	E-3	1900-1941	36	-.868	Yes
Army	E-3	1941-1963	23	.829	Yes
Army	E-3	1963-1974	12	-.881	Yes
Air Force	E-3	1949-1974	26	-.401	No
Air Force	E-3	1949-1958	10	.791	No
Air Force	E-3	1958-1974	17	-.850	Yes
Marine Corps	E-3	1945-1974	29	.116	No
Marine Corps	E-3	1945-1967	22	.284	No
Marine Corps	E-3	1967-1974	8	-.708	No

SOURCE: William Zierdt.



TABLE 11

BREAKDOWN OF ARMED FORCES RANKS BY TYPE OF CHANGE  
DISPLAYED IN THE TWENTIETH CENTURY

	Army	Navy	Air Force	Marine Corps
Increasing as Proportion of Total Personnel Over Time	O-10, O-9, O-8, O-6, O-5, O-4, O-3, O-1, E-9, E-8, E-7, E-6, E-5, E-4	O-9, O-6, O-5, O-4, O-3, E-9 E-8, E-6, E-5	O-10, O-9, O-8, O-7, O-6, O-5, O-4, O-3, E-9, E-8, E-6, E-5, E-4	O-9, O-4, O-3, E-9, E-8, E-6, E-5, E-4
Decreasing as Proportion of Total Personnel Over Time	O-7, E-1	E-2	O-2, E-2, E-1	E-2
Transition Rank (Hump-shaped Graph)	E-3, E-2	E-7, E-4	O-1, E-7, E-3	
Stable Ranks	O-2	O-10, O-8, O-7, O-2, O-1, E-3, E-1		O-10, O-8, O-7, O-6, O-5, O-2, O-1, E-7, E-3, E-1

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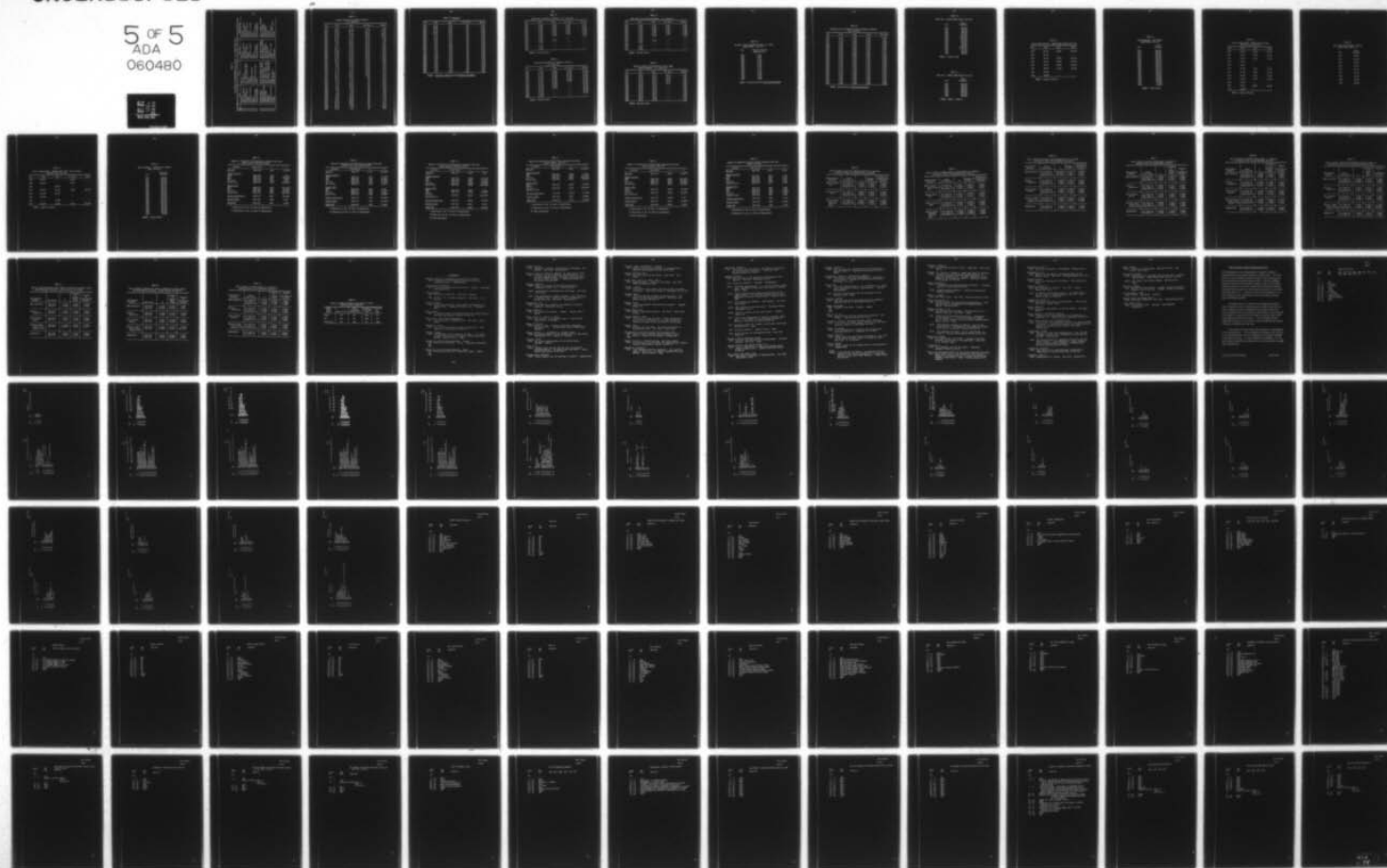
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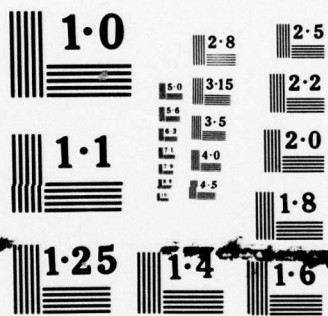
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TABLE 12  
PAY GRADES AND CORRESPONDING RANK TITLES: U.S. ARMED FORCES 1974

Rank	Army	Navy	Air Force	Marine Corps
O-10	General	Admiral	General	General
O-9	Lieutenant General	Vice-Admiral	Lieutenant General	Lieutenant General
O-8	Major General	Rear Admiral (Upper Half)	Major General	Major General
O-7	Brigadier General	Rear Admiral (Lower Half)	Brigadier General	Brigadier General
O-6	Colonel	Captain	Colonel	Colonel
O-5	Lieutenant Colonel	Commander	Lieutenant Colonel	Lieutenant Colonel
O-4	Major	Lieutenant Commander	Major	Major
O-3	Captain	Lieutenant	Captain	Captain
O-2	First Lieutenant	Lieutenant Junior Grade	First Lieutenant	First Lieutenant
O-1	Second Lieutenant	Ensign	Second Lieutenant	Second Lieutenant
E-9	Sergeant Major	Master Chief Petty Officer	Chief Master Sergeant	Master Gunnery Sergeant
E-8	Master Sergeant	Senior Chief Petty Officer	Senior Master Sergeant	Master Sergeant
E-7	Sergeant First Class	Chief Petty Officer	Master Sergeant	Gunnery Sergeant
E-6	Staff Sergeant	Petty Officer, First Class	Technical Sergeant	Staff Sergeant
E-5	Sergeant	Petty Officer, Second Class	Staff Sergeant	Sergeant
E-4	Corporal	Petty Officer, Third Class	Sergeant	Corporal
E-3	Private First Class	Seaman	Airman First Class	Lance Corporal
E-2	Private	Seaman Apprentice	Airman	Private First Class
E-1	Private	Seaman Recruit	Airman Basic	Private

TABLE 13

PERCENT OFFICERS BY BRANCH OF SERVICE:  
U.S. 1900-1975

Year	Army	Navy	Air Force	Marines
1975	13.10	12.30	17.20	9.70
1974	13.50	12.30	17.10	10.10
1973	14.48	12.41	16.64	9.69
1972	14.92	12.41	16.67	10.10
1971	13.26	11.88	16.69	10.38
1970	12.56	11.71	16.43	9.62
1969	11.57	11.53	16.14	8.30
1968	10.57	11.13	15.43	7.99
1967	9.94	10.87	15.09	8.27
1966	9.77	10.67	14.70	7.83
1965	11.52	11.58	15.92	9.06
1964	11.34	11.43	15.54	8.86
1963	11.05	11.35	15.36	8.82
1962	10.88	11.30	15.26	8.83
1961	11.64	11.16	15.68	9.12
1960	11.60	11.26	15.92	9.50
1959	11.80	11.14	15.66	9.15
1958	11.65	11.16	15.26	8.83
1957	11.14	10.88	15.28	8.68
1956	11.54	10.71	15.62	8.87
1955	10.99	11.28	14.29	8.98
1954	9.13	10.65	13.69	8.31
1953	9.49	10.29	13.38	7.52
1952	9.30	9.98	13.09	7.08
1951	8.52	9.57	13.58	7.87
1950	12.23	11.70	13.86	9.77
1949	11.70	10.67	13.80	8.43
1948	12.31	10.83	12.63	8.13
1947	13.37	10.51	0.00	8.07
1946	14.13	14.35	.00	9.13
1945	10.78	9.80	.00	7.81
1944	9.72	9.26	.00	6.89
1943	8.29	10.32	.00	6.93
1942	6.71	10.86	.00	6.01
1941	6.81	10.23	.00	6.14
1940	6.81	8.45	.00	6.35
1939	7.63	9.60	.00	7.10
1938	7.53	9.02	.00	7.40
1937	7.63	9.12	.00	7.20
1936	8.05	9.64	.00	7.00
1935	9.66	10.64	.00	6.74
1934	9.94	10.80	.00	7.26
1933	10.18	10.90	.00	7.42
1932	10.46	10.67	.00	7.22
1931	10.08	10.56	.00	6.37
1930	10.15	9.85	.00	6.23
1929	10.10	9.71	.00	6.28
1928	10.30	9.81	.00	6.30

TABLE 13--Continued

Year	Army	Navy	Air Force	Marines
1927	10.40	9.95	.00	6.24
1926	10.48	9.74	.00	6.15
1925	10.65	9.36	.00	6.00
1924	9.66	8.81	.00	5.69
1923	10.52	8.94	.00	5.80
1922	10.53	8.32	.00	5.35
1921	7.15	7.51	.00	4.73
1920	9.30	8.73	.00	6.43
1919	10.80	7.11	.00	4.65
1918	5.45	5.27	.00	2.85
1917	8.12	4.31	.00	2.80
1916	4.77	6.66	.00	3.28
1915	4.63	6.30	.00	3.29
1914	5.11	5.98	.00	3.24
1913	5.36	6.27	.00	3.32
1912	5.18	5.99	.00	3.48
1911	5.46	5.63	.00	3.41
1910	5.58	5.56	.00	3.43
1909	5.06	5.53	.00	3.38
1908	5.26	5.82	.00	3.06
1907	6.07	6.20	.00	3.45
1906	5.79	6.09	.00	3.38
1905	5.97	6.16	.00	3.85
1904	5.64	6.26	.00	3.36
1903	5.64	6.35	.00	3.20
1902	4.98	7.70	.00	3.07
1901	4.05	8.33	.00	2.92
1900	4.16	8.95	0.00	3.21

SOURCE: Statistical Abstract and Historical Statistics.



TABLE 14

MEAN RANKS FOR BRANCH OF SERVICE: U.S. 1905-1974

Year	Army	Navy	Air Force	Marines
1974	5.061	5.187	5.931	4.373
1970	4.906	5.154	5.710	4.286
1965	4.733	5.015	5.491	4.102
1960	4.790	4.927	5.447	3.988
1955	4.388	4.784	4.924	3.716
1950	4.644	5.016	4.858	3.978
1945	3.699	4.469	. . .	3.418
1940	2.581	. . .	. . .	. . .
1935	3.046	. . .	. . .	. . .
1930	3.046	4.671	. . .	. . .
1925	3.085	. . .	. . .	. . .
1920	. . .	. . .	. . .	. . .
1915	2.212	. . .	. . .	. . .
1910	2.216	. . .	. . .	. . .
1905	2.303	. . .	. . .	. . .

SOURCE: William Zierdt.

TABLE 15

MEAN RANK FOR OFFICERS BY BRANCH OF SERVICE:  
U.S. 1900-1974

Year	Army	Navy	Air Force	Marines
1974	13.216	13.196	13.250	12.843
1970	12.955	13.181	13.239	12.803
1965	13.037	12.997	13.164	12.875
1960	13.153	13.048	13.104	12.882
1955	12.913	12.928	12.755	12.613
1950	13.052	13.112	12.883	13.030
1945	12.333	12.283	12.898	12.924
1940	13.205	13.006	. . .	12.588
1935	12.973	13.028	. . .	12.947
1930	12.978	13.098	. . .	12.700
1925	12.950	13.025	. . .	12.749
1920	12.517	. . .	. . .	12.660
1915	12.575	. . .	. . .	12.494
1910	12.518	. . .	. . .	12.476
1905	12.557	. . .	. . .	. . .
1900	12.591	. . .	. . .	. . .

SOURCE: William Zierdt.

TABLE 16

MEAN RANKS FOR ENLISTED PERSONNEL: U.S. 1905-1974

Year	Army	Navy	Air Force	Marines
1974	3.937	4.111	4.391	3.501
1970	3.903	4.152	4.470	3.427
1965	3.744	3.978	4.057	3.305
1960	3.802	3.959	4.036	3.104
1955	3.425	3.816	3.649	2.885
1950	3.546	4.017	3.606	3.119
1945	2.721	3.665	. . .	2.734
1940	1.974	. . .	. . .	. . .
1935	2.044	. . .	. . .	. . .
1930	2.021	3.932	. . .	. . .
1925	2.027	. . .	. . .	. . .
1920	. . .	. . .	. . .	. . .
1915	1.696	. . .	. . .	. . .
1910	1.660	. . .	. . .	. . .
1905	1.697	. . .	. . .	. . .

SOURCE: William Zierdt.

TABLE 17

BRANCH OF SERVICE AS PERCENTAGE OF TOTAL ARMED  
FORCES PERSONNEL: U.S. 1900-1975

Year	Army	Navy	Air Force	Marines
1975	36.87	28.75	28.75	9.21
1970	43.12	22.57	25.80	8.48
1965	36.50	25.29	31.04	7.17
1960	35.26	24.95	32.90	6.89
1955	37.79	22.51	32.71	6.99
1950	40.62	26.13	28.16	5.09
1945	69.20	27.89	. . .	3.92
1940	58.69	35.12	. . .	6.18
1935	55.40	37.75	. . .	6.85
1930	54.52	37.90	. . .	7.58
1925	54.44	37.83	. . .	7.74
1920	59.51	35.49	. . .	5.00
1915	61.31	32.78	. . .	5.91
1910	58.31	34.83	. . .	6.86
1905	62.35	31.18	. . .	6.47
1900	80.77	14.93	. . .	4.30

SOURCE: William Zierdt.

TABLE 18

MILITARY-CIVILIAN EMPLOYEE RATIOS, U.S. TOTAL  
ARMED FORCES: 1901-1974

Year	Military-Civilian Employee Ratio
1974	2.052
1970	2.821
1965	2.653
1960	2.372
1955	2.473
1950	1.939
1945	4.601
1940	1.790
1935	1.713
1930	2.482
1925	2.650
1920	1.449
1915	3.002
1910	2.402
1901	2.496

SOURCE: William Zierdt and Statistical Abstract.



TABLE 19  
MILITARY-CIVILIAN EMPLOYEE RATIOS BY BRANCH OF SERVICE:  
U.S. 1947-1974

Year	Total	Army	Navy	Air Force
1974	2.052	1.481	2.290	2.289
1973	2.146	2.137	2.339	2.515
1972	2.170	2.160	2.285	2.580
1971	2.548	2.676	1.775	2.568
1970	2.821	3.074	1.922	2.663
1969	2.900	3.224	1.929	2.677
1968	2.954	3.355	1.813	2.909
1967	2.818	3.069	1.828	2.831
1966	2.679	2.629	1.975	2.761
1965	2.653	2.596	2.003	2.821
1964	2.740	2.686	2.040	2.941
1963	2.653	2.593	1.931	2.925
1962	2.679	2.707	1.915	2.889
1961	2.388	2.196	1.812	2.710
1960	2.372	2.239	1.781	2.654
1959	2.327	2.123	1.754	2.685
1958	2.373	2.161	1.761	2.757
1957	2.408	2.326	1.736	2.705
1956	2.378	2.364	1.700	2.615
1955	2.473	2.406	1.611	3.077
1954	2.731	2.838	1.757	3.170
1953	2.669	3.043	1.769	3.237
1952	2.719	2.935	1.714	3.172
1951	2.631	2.940	1.630	3.021
1950	1.939	1.367	1.042	2.211
1949	1.836	1.795	1.311	2.481
1948	1.660	1.382	1.208	3.204
1947	1.843	2.522	1.401	0.000

SOURCE: William Zierdt, Statistical Abstract.

TABLE 20

TOTAL SIZE: BRITISH ARMED FORCES 1900-1975

Year	Total Personnel
1975	349,000
1970	397,000
1965	456,000
1960	588,000
1955	922,000
1950	895,000
1945	5,011,000
1940	539,000
1935	322,000
1930	330,000
1925	347,000
1920	1,419,000
1915	1,315,000
1910	387,000
1905	428,000
1900	379,000

SOURCE: Timothy Stone.

TABLE 21

TOTAL SIZE: FRENCH ARMED FORCES 1950-1975

Year	Total Personnel
1975	561,552
1972	575,110
1970	563,198
1966	580,700
1962	950,965
1958	917,795
1954	667,282
1950	479,483

SOURCE: Michel L. Martin.

TABLE 22

## SIZE OF ARMY AND NAVY: GERMAN ARMED FORCES 1925-1932

Year	Army	Navy	Total
1932	99,191	15,000	114,191
1931	99,191	. . .	. . . .
1930	99,191	14,919	114,110
1929	99,191	15,000	114,191
1928	99,191	15,000	114,191
1927	99,191	14,914	114,105
1926	99,055	. . .	. . . .
1925	99,086	. . .	. . . .

SOURCE: League of Nations.



TABLE 23

TOTAL PERSONNEL: WEST GERMAN  
ARMED FORCES 1955-1975

Year	Total Personnel
1975	495,000
1974	490,000
1973	482,494
1972	485,372
1971	470,455
1970	458,630
1969	462,732
1968	439,773
1967	451,963
1966	453,963
1965	440,773
1964	435,294
1963	403,302
1962	389,403
1961	360,000
1960	272,200
1959	230,800
1958	172,100
1957	120,000
1956	67,000
1955	20,000

SOURCE: James Linger.

TABLE 24

SIZE OF ARMED FORCES: SWEDISH ARMY AND NAVY,  
SELECTED YEARS 1923-1939

Year	Army	Navy	Total
1939	26,833	8,520	35,353
1938	26,173	7,990	34,163
1937	24,072	7,230	31,302
1936	23,501	. . .	. . .
1935	23,501	. . .	. . .
1934	23,301	7,026	30,327
1933	23,307	7,838	31,145
1930	24,869	7,838	32,707
1929	20,559	7,026	27,585
1928	20,558	. . .	. . .
1924	35,657	13,805	49,462
1923	35,681	. . .	. . .

SOURCE: League of Nations.

TABLE 25

TOTAL MILITARY PERSONNEL: SWEDISH  
ARMED FORCES 1967-1975

Year	Total Personnel
1975	20,880
1974	20,800
1973	20,790
1972	24,270
1971	25,320
1970	25,420
1969	25,740
1968	25,860
1967	25,060



TABLE 26

SIZE OF ARMED FORCES: JAPANESE ARMY, NAVY, AND AIR FORCE,  
SELECTED YEARS 1923-1934

Year	Army	Navy	Air Force	Total
1934	299,824	. . .	8,904	. . . .
1933	299,824	. . .	8,904	. . . .
1932	. . . .	86,849	. . .	. . . .
1931	259,304	81,299	6,944	347,547
1930	210,880	81,288	. . .	. . . .
1928	210,880	. . .	. . .	. . . .
1925	. . . .	73,880	. . .	. . . .
1923	232,993	67,800	9,416	310,209

SOURCE: League of Nations.

TABLE 27

TOTAL PERSONNEL: JAPANESE SELF DEFENSE  
FORCE 1950-1973

Year	Authorized Strength
1973	260,046
1972	259,058
1971	260,688
1970	259,059
1969	258,074
1968	250,372
1967	250,372
1966	246,094
1965	246,094
1964	246,094
1963	243,923
1962	243,923
1961	242,009
1960	230,935
1959	230,935
1958	222,102
1957	214,182
1956	197,182
1955	179,769
1954	152,110
1952	123,323
1950	75,000

SOURCE: Thomas Brendle.

TABLE 28

RESULTS OF REGRESSION OF ORGANIZATIONAL VARIABLES OVER TIME:  
UNITED STATES, TWENTIETH CENTURY

Variable	Time Period	b	F
<u>Male MPR</u>	1900-1974	.5615	13.353**
<u>Percent officers</u>			
Total	1900-1974	.0020	1.281
Army	1900-1974	.0010	128.436**
Navy	1900-1974	.0007	5.849*
Air Force	1949-1974	.0140	3.218
Marine Corps	1900-1974	.0010	334.153**
<u>Percent NCO's</u>			
Army	1900-1974	.0044	279.546**
Navy	1947-1974	.0038	47.627**
Air Force	1947-1974	.0063	158.710**
Marine Corps	1947-1974	.0049	108.106**
<u>Percent ground force</u>	1900-1974	-.0045	60.587**
<u>Percent female</u>	1941-1974	-.0018	0.592
<u>Female MPR</u>	1941-1974	-.0013	4.672*

\* Significant at the .05 level of significance.

\*\* Significant at the .01 level of significance.

TABLE 29  
RESULTS OF REGRESSION OF ORGANIZATIONAL VARIABLES OVER TIME:  
UNITED STATES, POST-VIETNAM PERIOD

Variable	Time Period	b	F
<u>Male MPR</u>	1968-1974	-2.7656	136.084**
<u>Percent officers</u>			
Total	1968-1974	.0044	30.911**
Army	1968-1974	.0061	13.204*
Navy	1968-1974	.0021	32.672**
Air Force	1968-1974	.0022	22.317**
Marine Corps	1968-1974	.0034	8.027*
<u>Percent NCO's</u>			
Army	1968-1974	.0084	3.377
Navy	1968-1974	.0062	20.751**
Air Force	1968-1974	.0059	3.238
Marine Corps	1968-1974	.0090	22.959**
<u>Percent ground force</u>	1968-1974	-.0168	18.943**
<u>Percent female</u>	1968-1974	.3720	28.756**
<u>Female MPR</u>	1968-1974	.0043	8.568*

\* Significant at the .05 level of significance.

\*\* Significant at the .01 level of significance.



TABLE 30

RESULTS OF REGRESSION OF ORGANIZATIONAL VARIABLES OVER TIME:  
UNITED KINGDOM, TWENTIETH CENTURY

Variable	Time Period	b	F
<u>Male MPR</u>	1900-1973	-.00194	1.859
<u>Percent officers</u>			
Army	1900-1940	.00039	162.113**
Army	1963-1975	.00039	6.228*
Navy	1900-1975	.00092	746.106**
Air Force	1919-1975	.00149	78.286**
Marine Corps	1900-1975	.00078	1332.437**
<u>Percent NCO's</u>			
Army	1900-1940	.00006	0.506
Army	1963-1975	.00746	61.938**
Navy***	. . . . .	. . . . .	. . . . .
Air Force	1919-1975	.00540	361.481**
Marine Corps***	. . . . .	. . . . .	. . . . .
<u>Percent ground force</u>	1900-1975	-.00292	47.435**
<u>Percent female</u>	1939-1975	.02167	2.343
<u>Female MPR</u>	1939-1975	-.00002	23.325**

\* Significant at the .05 level of significance.

\*\* Significant at the .01 level of significance.

\*\*\* Data unavailable.

TABLE 31

RESULTS OF REGRESSION OF ORGANIZATIONAL VARIABLES OVER TIME:  
UNITED KINGDOM, 1953-1975

Variable	Time Period	b	F
<u>Male MPR</u>	1953-1973	-.00105	104.009**
<u>Percent officers</u>			
Army	1963-1975	.00039	6.228*
Navy	1953-1975	.00134	117.811**
Air Force	1953-1975	.00440	821.224**
Marine Corps	1953-1975	.00112	91.019**
<u>Percent NCO's</u>			
Army	1963-1975	.00746	61.938**
Navy***	. . . . .	. . . . .	. . . . .
Air Force	1953-1975	.01016	108.991**
Marine Corps***	. . . . .	. . . . .	. . . . .
<u>Percent ground force</u>	1953-1975	-.00257*	10.120**
<u>Percent female</u>	1953-1975	.9398	65.689**
<u>Female MPR</u>	1953-1973	-.00117	19.388**

\* Significant at the .05 level of significance.

\*\* Significant at the .01 level of significance.

\*\*\* Data unavailable.

TABLE 32

RESULTS OF REGRESSION OF ORGANIZATIONAL VARIABLES OVER TIME:  
UNITED KINGDOM, 1958-1975

Variable	Time Period	b	F
<u>Male MPR</u>	1958-1973	-.00058	63.834**
<u>Percent officers</u>			
Army	1963-1975	.00039	821.224**
Navy	1958-1975	.00155	78.051**
Air Force	1958-1975	.00409	389.459**
Marine Corps	1958-1975	.00112	36.746**
<u>Percent NCO's</u>			
Army	1963-1975	.00746	61.938**
Navy***	. . . . .	. . . . .	. . . . .
Air Force	1958-1975	.00702	36.219**
Marine Corps***	. . . . .	. . . . .	. . . . .
<u>Percent ground force</u>	1958-1975	-.00052*	0.235
<u>Percent female</u>	1958-1975	.08249	29.981**
<u>Female MPR</u>	1958-1973	-.00039	5.612*

\* Significant at the .05 level of significance.

\*\* Significant at the .01 level of significance.

\*\*\* Data unavailable.

TABLE 33  
RESULTS OF REGRESSION OF ORGANIZATIONAL VARIABLES OVER TIME:  
FRANCE, 1950-1970

Variable	Time Period	b	F
<u>Male MPR</u>	1950-1970	-.0227	0.143
<u>Percent officers</u>			
Total	1950-1970	.0010	2.736
Army	1950-1970	.0012	2.135
Navy	1950-1970	.0001	0.235
Air Force	1950-1970	.0002	0.130
Command Service	1950-1970	.0013	4.720
<u>Percent NCO's</u>			
Total	1950-1970	.0028	1.326
Army	1950-1970	.0012	0.838
Navy	1950-1970	.0023	42.450**
Air Force	1950-1970	.0040	1.935
Command Service	1950-1970	-.0013	5.601
<u>Percent ground force</u>	1950-1970	-.0031	0.728
<u>Percent female</u>	1950-1970	.0006	10.831*
<u>Female MPR</u>	1950-1970	.0010	4.253

\* Significant at the .05 level of significance.

\*\* Significant at the .01 level of significance.



TABLE 34

RATE OF CHANGE IN MILITARY PARTICIPATION RATIO AS FUNCTION  
OF EXISTING LEVELS AND ORGANIZATIONAL VARIABLES

Organizational Variable	Nation (Time Period)	$a_i$	Parameter of MPR	Parameter of Organizational Variable
Percent ground force	U.S. (1900-74)	-0.74690	-0.18258	0.19694
	U.K. (1900-74)	0.32938	-0.23129	-0.00001
	France (1950-70)	1.42445	0.22635	-0.02415
Percent officers --Army	U.S. (1970-74)	1.64870	-0.09671	-0.04963
	U.K. (1963-74)	0.03003	-0.35482	-0.00103
	France (1950-70)	1.98075	-0.20857	-0.05113
Percent noncom- missioned officers-- Army	U.S. (1900-74)	0.47813	-0.25068	-0.02582
	U.K. (1963-74)	-0.00341	0.07629	0.00003
	France (1950-70)	-5.19822	0.52276	-0.00316

TABLE 35

RATE OF CHANGE IN PERCENT FEMALE IN ARMED FORCES AS A FUNCTION  
OF EXISTING LEVELS AND ORGANIZATIONAL VARIABLES

Organizational Variable	Nation (Time Period)	$a_i$	Parameter of MPR	Parameter of Organizational Variable
Male military participation rate	U.S. (1939-74)	-0.37151	0.28037	0.02014
	U.K. (1938-74)	-27.32336	-0.63595	0.00572
	France (1950-70)	1.02870	-0.28658	-0.02823
Percent ground force	U.S. (1939-74)	0.06171	0.03478	-0.08678
	U.K. (1938-74)	-26.35101	-0.74712	0.02271
	France (1950-70)	1.31851	-0.14744	-0.41387
Percent officers --Army	U.S. (1939-74)	-0.05962	-0.00173	0.00631
	U.K. (1963-74)	-0.04871	-0.52709	0.23633
	France (1950-70)	0.31770	0.61995	-0.04821
Percent noncom- missioned officers-- Army	U.S. (1939-74)	-0.06239	0.03120	0.00331
	U.K. (1963-74)	0.00350	-0.76856	0.02671
	France (1950-70)	-0.62228	-0.24129	0.00964

TABLE 36

RATE OF CHANGE IN MILITARY PARTICIPATION RATIO AS A FUNCTION  
OF EXISTING LEVELS AND ENVIRONMENTAL VARIABLES

Environmental Variable	Nation (Time Period)	$a_i$	Parameter of MPR	Parameter of Environmental Variable
Male population	U.S. (1900-74)	-460.49680	-0.25474	0.00590
	U.K. (1900-74)	295.58170	0.52932	-0.01652
	France(1950-70)	495.11150	0.07517	-0.03595
Military expenditure	U.S. (1900-74)	0.18534	-0.18359	-0.01443
	U.K. (1900-74)	0.52932	0.11059	-0.00041
	France(1950-70)	1.98774	-0.51460	-0.00003
Gross national product	U.S. (1900-74)	0.19630	-0.15889	-0.00412
	U.K. (1900-74)	1.84358	-0.17639	-0.00020
	France(1950-70)	0.34235	0.04638	0.00000
Military expenditure as percentage of GNP	U.S. (1900-74)	0.09290	-0.62232	-7.27222
	U.K. (1900-74)	0.22107	0.60584	-14.90362
	France(1950-70)	1.09605	-0.24572	-7.03667
Unemployment	U.S. (1900-74)	0.68142	-0.22588	0.00003
	U.K. (1900-74)	-1.72084	0.03886	0.00081

TABLE 37

RATE OF CHANGE IN PERCENT GROUND FORCE AS FUNCTION OF  
EXISTING LEVELS AND ENVIRONMENTAL VARIABLES

Environmental Variable	Nation (Time Period)	$a_i$	Parameter of Percent Ground Force	Parameter of Environmental Variable
Male population	U.S. (1900-74)	0.32538	-0.34113	0.00001
	U.K. (1900-74)	0.32938	-0.23129	-0.00001
	France(1950-70)	0.45153	-0.35204	0.00000
Military expenditure	U.S. (1900-74)	0.09807	-0.17207	-0.00037
	U.K. (1900-74)	0.09195	-0.14707	-0.00001
	France(1950-70)	0.36261	-0.28780	0.00000
Gross national product	U.S. (1900-74)	0.13566	-0.21345	-0.00009
	U.K. (1900-74)	0.20329	-0.30048	0.00000
	France(1950-70)	0.00674	0.02192	0.00000
Military expenditure as percentage of GNP	U.S. (1900-74)	0.08660	-0.15021	-0.17190
	U.K. (1900-74)	0.07778	-0.13386	-0.01132
	France(1950-70)	0.81213	-1.21663	-1.60390
Unemployment	U.S. (1900-74)	0.03991	-0.10529	0.00000
	U.K. (1900-74)	0.06662	-0.12009	0.00000



TABLE 38

RATE OF CHANGE IN PERCENT OFFICERS (ARMY) AS A FUNCTION  
OF EXISTING LEVELS AND ENVIRONMENTAL VARIABLES

Environmental Variable	Nation (Time Period)	$a_i$	Parameter of Percent Officers (Army)	Parameter of Environmental Variable
Male population	U.S. (1900-74)	0.44528	-0.32411	-0.00003
	U.K. (1962-74)	0.87864	0.52701	0.00022
	France (1950-70)	-0.78537	-0.00375	0.00000
Military expenditure	U.S. (1900-74)	2.40000	-0.31336	0.01730
	U.K. (1962-74)	25.34193	-1.78207	0.00019
	France (1950-70)	-0.47076	0.09075	-0.00006
Gross national product	U.S. (1900-74)	1.93454	-0.29448	0.00298
	U.K. (1962-74)	-8.03155	0.78456	0.00001
	France (1950-70)	-0.49101	0.07155	0.00000
Military expenditure as percentage of GNP	U.S. (1900-74)	1.94532	-0.26814	7.11178
	U.K. (1962-74)	-18.60635	1.53893	46.27773
	France (1950-70)	-1.43689	0.29050	-9.10843
Unemployment	U.S. (1900-74)	1.34320	-0.10922	-0.00003
	U.K. (1962-74)	9.14052	-0.84751	0.00000

TABLE 39

RATE OF CHANGE IN PERCENT NONCOMMISSIONED OFFICERS (ARMY) AS A  
FUNCTION OF EXISTING LEVELS AND ENVIRONMENTAL VARIABLES

Environmental Variable	Nation (Time Period)	$a_i$	Parameter of Percent NCO's (Army)	Parameter of Environmental Variable
Male population	U.S. (1900-74)	-6.80211	-0.23770	-0.00022
	U.K. (1963-74)	-84.00189	-1.02146	0.00888
	France (1950-70)	-4.04188	-0.02677	0.00000
Military expenditure	U.S. (1900-74)	0.41433	-0.06178	0.01484
	U.K. (1963-74)	8.48179	-0.27678	0.00077
	France (1950-70)	-7.81731	0.46489	-0.00008
Gross national product	U.S. (1900-74)	0.00829	-0.07318	0.00247
	U.K. (1963-74)	2.95182	-0.06530	0.00002
	France (1950-70)	-5.37694	0.28770	0.00003
Military expenditure as percentage of GNP	U.S. (1900-74)	0.15651	-0.03829	6.42126
	U.K. (1963-74)	57.83328	-0.83977	-265.57030
	France (1950-70)	7.97132	-0.48962	29.48343
Unemployment	U.S. (1900-74)	0.46478	-0.00137	-0.00003
	U.K. (1963-74)	3.96728	-0.05944	0.00000

TABLE 40

RATE OF CHANGE IN PERCENT OFFICER (ARMY) AS FUNCTION OF EXISTING LEVELS  
AND ENVIRONMENTAL VARIABLES: UNITED KINGDOM, TWO PERIODS

Environmental Variable	Time Period	$a_i$	Parameter of Percent Officer (Army)	Parameter of Environmental Variable
Male population	1900-1940	0.22102	-0.06605	0.00000
	1963-1974	0.87864	0.52701	0.00022
Military expenditure	1900-1940	0.30977	-0.05734	-0.00001
	1963-1974	25.34193	-1.78207	0.00019
Gross national product	1900-1940	-0.26597	0.13121	-0.00005
	1963-1974	-8.03155	0.78456	0.00001
Military expenditure as percentage of GNP	1900-1940	0.07952	-0.01973	0.05144
	1963-1974	-18.60635	1.53893	46.27773
Unemployment	1900-1940	0.38435	-0.75181	0.00001
	1963-1974	9.14052	-0.84751	0.00000

TABLE 41

RATE OF CHANGE IN PERCENT NCO (ARMY) AS FUNCTION OF EXISTING LEVELS  
AND ENVIRONMENTAL VARIABLES: UNITED KINGDOM, TWO PERIODS

Environmental Variable	Time Period	$a_i$	Parameter of Percent NCO's (Army)	Parameter of Environmental Variable
Male population	1900-1940	-0.75181	0.03675	0.00002
	1962-1974	-84.00189	-1.02146	0.00888
Military expenditure	1900-1940	-0.74800	0.11574	-0.00026
	1962-1974	8.48179	-0.27678	0.00077
Gross national product	1900-1940	0.47903	-0.03398	-0.00002
	1962-1974	2.95182	-0.06530	0.00002
Military expenditure as percentage of GNP	1900-1940	-0.31216	0.06728	-1.32021
	1962-1974	57.83328	-0.83977	-265.57030
Unemployment	1900-1940	0.54071	-0.06995	0.00002
	1962-1974	3.96728	-0.05944	0.00000



TABLE 42

RATE OF CHANGE IN PERCENT FEMALE AS A FUNCTION OF  
EXISTING LEVELS AND ENVIRONMENTAL VARIABLES

Environmental Variable	Nation (Time Period)	$a_i$	Parameter of Percent Female	Parameter of Environmental Variable
Male population	U.S. (1939-74)	-0.11128	-0.06725	0.00002
	U.K. (1938-74)	6.36154	-0.23008	-0.00028
	France (1950-70)	0.48838	0.15226	0.00000
Military expenditure	U.S. (1939-74)	-0.44381	0.34447	0.00625
	U.K. (1938-74)	1.14157	-0.87943	0.00031
	France (1950-70)	-0.52460	0.45156	-0.00001
Gross national product	U.S. (1939-74)	-0.03480	-0.10465	0.00048
	U.K. (1938-74)	1.31243	-0.21675	-0.00003
	France (1950-70)	-0.00615	0.01056	0.00000
Military expenditure as percentage of GNP	U.S. (1939-74)	-0.50141	0.42732	2.69790
	U.K. (1938-74)	2.49647	-0.86194	1.43084
	France (1950-70)	0.62857	-0.53397	5.18373
Unemployment	U.S. (1939-74)	0.08769	0.02272	-0.00001
	U.K. (1938-74)	1.18047	-0.19184	-0.00021

TABLE 43

STATUS OF ARMED FORCE MODELS WITH RESPECT TO FOUR  
ORGANIZATIONAL DIMENSIONS

Armed Forces Model	Mobilization	Rank Structure Heterogeneity	Reliance On Ground Force	Utilization of Women
Feudal	low	low	high	low
Mass	high	low	high	low
Constabulary	low	high	low	high

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## The Comparative Military Institutions Data Set

The data gathered by the working group on Comparative Military Institutions has been presented elsewhere in tabular form. For those who wish to use the data for computer analyses, these materials have been key-punched on standard computer cards. Since the resulting product is immense and is therefore awkward to utilize in its totality, it has been stored as a series of compact files from which the analyst may select those variables for those countries in which he is interested while ignoring the rest. Using any standard sorting program, he can then construct a larger file suitable for use with program packages such as STATPAK and SPSS.

Internally each file is arranged in chronologically ascending order, though the number and spacing of years within a given file may vary in conjunction with the availability of the original information. The sequencing of files is in accordance with the layout of this codebook. In this fashion, the data set has been printed on magnetic tape in DOS card-images by an IBM 370 computer. Each card image contains eighty (80) characters and the cards are stored in 1600 character blocks. The tape is a standard nine-track tape.

A tape dump of the data might further facilitate an understanding of the storage process. For the inexperienced computer user, however, it is recommended that he seek the assistance of a soft-ware consultant at any IBM-370 facility. If such a facility is not available, it is even more highly stressed that the assistance of a soft-ware adviser be sought when using this data.

University of South Alabama.

David Currie

France

FRA503

Summaries 1900-1975

Cases	ID#	1900, 1910, 1914, 1920, 1926, 1950, 1954, 1958,
13	503	1962, 1966, 1970, 1972, 1975

col.

1 - 4	Year
5 - 9	Officers
10 - 12	% Officers
13 - 18	NCO's
19 - 20	% NCO
21 - 26	Private
27 - 30	% Private
31 - 36	All Military
37 - 41	Female Personnel
42 - 47	Civilian Personnel
48 - 77	Blank
78 - 80	ID#



France  
FRA504

Military Expenditures Per Arms & Priorities

Cases	ID#	Year
63	504	1913-1975
col.		
1 - 4		Military Expenditures
5 - 10		Mil. Exp. as % of total budget
11 - 14		Mil. Exp. as % of National Revenue
15 - 18		('49-'53 billions of francs)
		('54-'59 former currency)
		('60-'75 new currency)
19 - 22		Common Services (includes Gendarmeries)
23 - 27		Army
28 - 31		Air Force
32 - 35		Navy
36 - 39		Common Services
40 - 44		Army
45 - 49		Air Force
50 - 53		Navy
54 - 77		Blank
78 - 80		ID#

France  
FRA505

Gender/GNP

Cases	ID#	Year
6	505	1950, 1954, 1958, 1962, 1966, 1970
col.		
1 - 4		Year
5 - 14		Males
15 - 24		Females
25 - 34		GNP
35 - 77		Blank
78 - 80		ID#

France  
FR1502

Ground Forces Summaries/Enlisted

1900, 1910, 1914 1920, 1926, 1950, 1954, 1958, 1962, 1966, 1970, 1972, 1975

ID#  
1502

Cases  
13

col.

1 - 4  
5 - 9  
10 - 14  
15 - 20  
21 - 25  
26 - 31  
32 - 37  
38 - 76  
77 - 80

Year  
Corporal/Quartier Maître, 2ème classe  
Soldat, 1ère classe/Metallout, 1ère classe  
Soldat, 2ème classe/Metallout, 2ème classe  
Metallout, 3ème classe  
Total WO's & Privates  
Grand Total  
Blank  
ID#

France  
FR1501

Ground Force Summaries/Officers & Higher E.M.'s

1900, 1910, 1914, 1920, 1926, 1950, 1954, 1958, 1962, 1967, 1970, 1972, 1975

ID#  
1501

Cases  
13

col.

1 - 4  
5 - 6  
7 - 9  
10 - 13  
14 - 17  
18 - 21  
22 - 26  
27 - 30  
31 - 35  
36 - 40  
41 - 44  
45 - 59  
50 - 54  
55 - 58  
59 - 63  
64 - 68  
69 - 73  
74 - 76  
77 - 80

Year  
General of Division/Vice-Admiral  
General de Brigade/Contre Amiral  
Colonel/Capitaine de vaisseau  
Lieutenant Colonel/Capitaine de frigate  
Commandant/Capitaine de Corvette  
Capitaine/Lieutenant de Vaisseau  
Lieutenant/Enseigne de Vaisseau de 1ère classe  
Sous-Lieutenant/Enseigne de Vaisseau de 2ème classe  
Total Officers  
Aspirant  
Adjudant-Chef/Maitre-Principal  
Adjudant/Premier Maitre  
Sergent-major/Maitre  
Sergent-chef/Second Maitre, 1ère classe  
Sergent/Second Maitre, 2ème classe  
Corporal-chef/Quartier Maitre, 1ère classe  
Blank  
ID#

France  
FR2501

Navy Summaries/Officers & Higher E.M.'s

Cases 9  
ID# 2501  
1926, 1950, 1954, 1958, 1962, 1966, 1970, 1972, 197

col.

1 - 4  
5 - 6  
7 - 9  
10 - 13  
14 - 17  
18 - 21  
22 - 26  
27 - 30  
31 - 35  
36 - 40  
41 - 44  
45 - 49  
50 - 54  
55 - 58  
59 - 63  
64 - 68  
69 - 73  
74 - 76  
77 - 80

Year  
General of Division/Vice-Admiral  
General de Brigade/Contre Admiral  
Colonel/Capitaine de vaisseau  
Lieutenant Colonel/Capitaine de frigate  
Commandant/Capitaine de Corvett  
Capitaine/Lieutenant de Vaisseau  
Lieutenant/Enseigne de Vaisseau de 1ere classe  
Sous-Lieutenant/Ensigne de Vaisseau de 2eme classe  
Total Officers  
Aspirant  
Adjudant-Chef/Maitre-Principal  
Adjudant/Premier Maitre  
Sergent-major/Maitre  
Sergent-chef/Second Maitre, 1ere classe  
Sergent/Second Maitre, 2eme classe  
Corporal-chef/Quartier Maitre, 1ere classe  
Blank  
ID#

France  
FR2502

Navy Summaries/Enlisted

Cases 9  
ID# 2502  
1926, 1950, 1954, 1958, 1962, 1966, 1970, 1972, 1975

col.

1 - 4  
5 - 9  
10 - 14  
15 - 20  
21 - 25  
26 - 31  
32 - 37  
38 - 76  
77 - 80

Year  
Capitaine/Quartier Maitre, 2me classe  
Sous-Lieutenant, 1ere classe  
Sous-Lieutenant, 2me classe  
Sous-Lieutenant, 3me classe  
Total Enlisted & Privates  
Grand Total  
Blank  
ID#

France  
FR3502

Air Force Summaries/Enlisted

Cases 13  
ID# 3502  
1900, 1910, 1914, 1920, 1926, 1950, 1954, 1958,  
1962, 1966, 1970, 1972, 1975

col.

1 - 4  
5 - 9  
10 - 14  
15 - 20  
21 - 25  
26 - 31  
32 - 37  
38 - 43  
44 - 49  
50 - 55  
56 - 61  
62 - 67  
68 - 73  
74 - 79  
80 - 85  
86 - 91  
92 - 97  
98 - 103  
104 - 109  
110 - 115  
116 - 121  
122 - 127  
128 - 133  
134 - 139  
140 - 145  
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France

FR5502

Command Services Summaries/Enlisted

1900, 1910, 1914, 1920, 1926, 1950, 1954,  
1958, 1962, 1966, 1970, 1972, 1975

ID# 5502  
Cases 13

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Year  
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Soldat, 1ere classe/Matelont, 1ere classe  
Matelot, 3eme classe  
Total NCO's & Privates  
Grand Total  
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France

FR5501

Command Service Summaries/Officers & Higher E.M.'s

1900, 1910, 1914, 1920, 1926, 1950, 1954, 1958,  
1962, 1966, 1970, 1972, 1975

ID# 5501  
Cases 13

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27 - 30  
31 - 35  
36 - 40  
41 - 44  
45 - 49  
50 - 54  
55 - 58  
59 - 63  
64 - 68  
69 - 73  
74 - 76  
77 - 80  
ID#

Year  
General of Division/Vice Admiral  
General de Brigade/Contre Admiral  
Colonel/Capitaine de vaisseau  
Lieutenant Colonel/Capitaine de frigate  
Commandant/Capitaine de Corvett  
Capitaine/Lieutenant de Vaisseau  
Lieutenant/Enseigne de Vaisseau de 1ere classe  
Sous-Lieutenant/Enseigne de Vaisseau de 2eme classe  
Total Officers  
Aspirant  
Adjudant-Chef/Maitre-Principal  
Adjudant/Premier Maitre  
Sergent-major/Maitre  
Sergent-chef/Second Maitre, 1ere classe  
Sergent/Second Maitre, 2eme classe  
Corporal-chef/Quartier Maitre, 1ere classe  
Blank

Japan

JAP401

## Ground Self-Defense Force Personnel Strengths

Cases	ID#	Year
24	401	1950-1973
col.		
1 - 4		Year
5 - 10		Authorized Strength
11 - 16		Actual Strength
17 - 21		Vacancies
22 - 25		% filled
		(all services '50-'59 GSDF '65-'72)
26 - 30		Planned number of Recruits
31 - 36		Number of Applicants
37 - 42		Number of Applicants taking Exams
43 - 47		Number of Personnel entering SDF
48 - 50		Ratio of Applicants/Panned number
51 - 53		Defense Academy Panned Admission
54 - 58		Defense Academy number of Applicants
59 - 61		Defense Academy number Admitted
62 - 64		Officer Recruitment from Civilian University by number
		entering service per year
65 - 77		Blank
78 - 80		ID#

Japan

JAP402

## GSDF Personnel by Rank Categories

Cases	ID#	Year
4	402	1954, 1967, 1969, 1970
col.		
1 - 4		Year
6 - 10		Officers (Authorized) (A)
11 - 15		Officers (Actual) (B)
16 - 19		Officers (Vacancies)
20 - 21		% filled (B/A*100)
22 - 26		Sergeants (Authorized)
27 - 31		Sergeants (Actual)
32 - 35		Sergeants (Vacancies)
36 - 39		% Filled
40 - 44		Privates (Authorized)
45 - 59		Privates (Actual)
50 - 54		Privates (Vacancies)
55 - 56		% Billed
57 - 77		Blank
78 - 80		ID#

Japan  
JAP403

Japanese Defense Expenditures

Cases	ID#	Year
24	403	1951-1974
col.		
1 - 4		Year
5 - 9		Defense Expenditures (A)
10 - 15		National Budget Expenditures (B)
16 - 22		GNP (C)
23 - 27		A/B
28 - 31		A/C
32 - 37		Defense Expenditures (A)
38 - 44		National Budget Expenditures (B)
45 - 52		GNP
53 - 57		A/B
58 - 61		A/C
62 - 77		Blank
78 - 80		ID#

(in dollars)

(in billion yen)

Japan  
JAP404

Personnel Strengths for SDF

Cases	ID#	Year
25	404	1952-1976
col.		
1 - 4		Year
5 - 10		Authorized
11 - 16		Actual
17 - 22		U.S. force in Japan
23 - 77		Blank
78 - 80		ID#

Sweden  
SMD602

Military & Civilian Personnel, # of Posts

Cases	ID#
9	602
col.	
1 - 4	Year
5 - 8	Central Military Agencies
9 - 13	Army
14 - 17	Navy
18 - 21	Air Force
22 - 26	Total
27 - 29	Ministry of Defense
30 - 34	Central Military Agencies
35 - 38	Army
39 - 42	Navy
43 - 46	Air Force
47 - 51	Total
52 - 56	Military Personnel, number of posts
57 - 61	Civilian Personnel, number of posts
62 - 66	Total
67 - 77	Blank
78 - 80	ID#

Sweden  
SMD601

Military & Civilian Personnel, # of Employed

Cases	ID#
74	601
col.	
1 - 4	Year
5 - 8	Male Population (000's)
9 - 12	Female Population (000's)
13 - 16	Total Population (000's)
17 - 22	GNP (mil. of crowns) A
23 - 26	Ministry of Defense Expenditure B
27 - 31	Defense as % of GNP B/A * 100
32 - 33	Ministry
34 - 37	Central Military Agencies
38 - 42	Army
43 - 46	Navy
47 - 51	Air Force
52 - 56	Total
57 - 77	Blank
78 - 80	ID#



United Kingdom  
K212

Naval Rank Structure

1900-2, 1911-12, 1921-22, 1924-25, 1927-28,  
1931-32, 1934-35, 1938-39, 1949-51, 1960-61,  
1964-65, 1974-75  
(2 1950 cards)

ID#  
212

Cases  
26

Col.

1 - 4  
5 - 10  
11 - 16  
17 - 22  
23 - 28  
29 - 34  
35 - 40  
41 - 46  
47 - 52  
53 - 77  
78 - 80

Year  
Flag Officers  
Flag and Commissioned  
Commissioned Officers  
Warrant and Subordinate Officers  
Petty Officers and Men  
P.O.'s/Men and Boys  
Boys  
Totals  
Blank  
ID#

United Kingdom

K213

Civilian Employees

1936-1975

ID#

213

Cases

40

Col.

1 - 4  
5 - 9  
10 - 14  
15 - 19  
20 - 24  
25 - 29  
30 - 34  
35 - 77  
Blank  
78 - 80  
ID#

Year  
Navy  
Army  
Air Force  
Centre  
Ministry of Supply  
Total  
Blank  
ID#

United Kingdom

K214

Naval Ranks - Subdivisions

1900-02, 1911-12, 1921-22, 1924-25, 1927-28,  
1931-32, 1934-35, 1938-39, 1949-51, 1960-61,  
1964-65, 1974-75

ID#

214

Cases

26

Col.

1 - 4  
5  
6 - 8  
9 - 11  
12 - 14  
15 - 17  
18 - 20  
21 - 25  
26 - 30  
31 - 35  
36 - 40  
41 - 45  
46 - 50  
51 - 77  
Blank  
78 - 80  
ID#

Year  
General Officers  
Senior Officers  
Junior Officers  
Commissioned Officers  
Officers (Com. and War.)  
Warrant Officers  
Sergeants  
Musical ranks  
Rank and File  
Band Boys  
Other Ranks (all 21-40)  
Total  
Blank  
ID#

United Kingdom  
K220

United Kingdom Reserves  
1900-40, 1948-75

Cases  
69  
Col.  
1 - 4  
8 - 10  
13 - 16  
20 - 22  
26 - 28  
29 - 77  
78 - 80

Year  
Navy  
Army  
Air Force  
Tri-Service (000's)  
Blank  
ID#

United Kingdom  
UK0201

Population  
1900-1975

Cases  
76  
ID#  
0201

col.

1 - 4  
5 - 8  
9 - 17  
18 - 26  
27 - 35  
36 - 44  
45 - 53  
54 - 62  
63 - 71  
72 - 80

Date  
ID#  
Total  
Male  
Female  
Civilian Employed  
Unemployed  
Military Personnel  
Working Population  
Blank

United Kingdom  
UK0202

Total Defense Budget

1900-1975

Cases  
76

ID#  
0202

col.

1 - 4  
5 - 8  
9 - 17  
18 - 26  
27 - 35  
36 - 44  
45 - 53  
54 - 62  
63 - 71  
72 - 80

Year  
ID#  
Defense Total  
Army  
Navy  
Air Force  
Marines  
Central  
G.N.P.  
Blank

United Kingdom  
UK0203

Personnel by Branch of Service

1900-1975

Cases  
76

ID#  
0203

col.

1 - 4  
5 - 8  
9 - 17  
18 - 26  
27 - 35  
36 - 44  
45 - 53  
54 - 62  
63 - 80

Year  
ID#  
Total  
Army  
Navy + Marines  
Air Force  
Marines  
Central  
Blank



United Kingdom  
UK0213

Total Female Military Personnel

1939-1975

ID#  
0213

Cases  
37

col.

1 - 4  
5 - 8  
9 - 17  
Female Total  
18 - 26  
Army  
27 - 35  
Navy + Marines  
36 - 44  
Air Force  
45 - 53  
Marines  
54 - 62  
Central  
63 - 80  
Blank

United Kingdom  
UK0216

Civilian Employees

1936-1975

ID#  
0216

Cases  
40

col.

1 - 4  
5 - 8  
9 - 17  
Total  
18 - 26  
Army  
27 - 35  
Navy  
36 - 44  
Air Force  
45 - 56  
Marines  
57 - 62  
Central  
63 - 71  
Ministry of Supply  
72 - 80  
Blank

United Kingdom  
UK0220

Army Personnel by Rank

1900-1940

ID#  
0220

Cases  
41

col.

1 - 4  
5 - 8  
9 - 16  
17 - 24  
25 - 32  
33 - 40  
41 - 48  
49 - 56  
57 - 80

Year  
ID#  
Army  
Officer Total  
Enlisted Total  
Warrant Officer  
Sergeant  
Lower Enlisted  
Blank

United Kingdom  
UK0221

Navy Personnel by Rank

1900-1915, 1920-1939, 1950-1975

ID#  
0221

Cases  
62

col.

1 - 4  
5 - 8  
9 - 16  
17 - 24  
25 - 32  
33 - 40  
41 - 48  
49 - 56  
57 - 64  
65 - 72  
73 - 80

Year  
ID#  
Total  
Flag Officers  
Commissioned Officers (Flag + Com. 1920-1949)  
Senior Officers (1964-1975)  
Junior Officers (1964-1975)  
Warrant and Subordinate Officers  
Petty Officers + Men  
Boys  
Blank

} Combined 1950-1975  
in col. 73 - 80

United Kingdom  
UK0223

Marine Personnel by Rank

1900-15, 1920-1940, 1948-1975

ID#  
0223

Cases  
65

col.

Year  
ID#  
Total  
Officers  
Commissioned Officers  
Warrant Officers  
General Officers  
Senior Officers  
Junior Officers  
Sergeant & Staff Sgt.  
Rank & File + Band Boys

1 - 4  
5 - 8  
9 - 16  
17 - 24  
25 - 32  
33 - 40  
41 - 48  
49 - 56  
57 - 64  
65 - 72  
73 - 80

United Kingdom  
UK0222

Air Force Personnel by Rank

1919-1940, 1947-1975

ID#  
0222

Cases

col.

Year  
ID#  
Total  
Air Officers  
Senior Officers  
Junior Officers  
Commissioned Officers  
Cadets + Warrant Officers + NCO  
NCO  
Lower Enlisted

1 - 4  
5 - 8  
9 - 16  
17 - 24  
25 - 32  
33 - 40  
41 - 48  
49 - 56  
57 - 64  
65 - 80

United Kingdom  
K1222

United Kingdom Regular Only  
1900-02, 1904-15, 1921-40

Cases	ID#	Year
35	1222	Officers Total
col.		Warrant Officers
1 - 4		Sergeants
5 - 10		Drummer
11 - 16		Men
17 - 22		Total Other Ranks
23 - 28		Total
29 - 34		Blank
35 - 40		ID#
41 - 46		
47 - 52		
53 - 58		
59 - 64		
65 - 70		
71 - 76		
77 - 80		

United Kingdom  
UK0224

Army Personnel by Rank

1963-1975

Cases	ID#	Year
13	0224	ID#
col.		Total
1 - 4		Officer Total
5 - 8		Other Ranks Total
9 - 16		Senior Officers
17 - 24		Junior Officers
25 - 32		Warrant Officer + NCO
33 - 40		Private
41 - 48		Blank
49 - 56		
57 - 64		
65 - 70		
71 - 76		
77 - 80		



United Kingdom  
K2221

Navy Officers and OR's  
1900-15, 1920-39, 1950-75

Cases	ID#
62	2221
col.	
1 - 4	Year
5 - 10	Flag Officers
11 - 16	Commissioned
17 - 22	Senior
23 - 28	Junior
29 - 34	Warrant O. and Sub. O.
35 - 40	P.O.'s and Men
41 - 46	Boys
47 - 52	Enlisted
53 - 58	Total
59 - 76	Blank
77 - 80	ID#

United Kingdom  
K1223

Army - Modern Males and Females  
1963-75

Cases	ID#
13	1223
col.	
1 - 4	Year
5 - 10	Senior Officers
11 - 16	Junior Officers
17 - 22	Total Officers
23 - 28	Warrant Officers and Non-commissioned Officers
29 - 34	Privates
35 - 40	Total other ranks
41 - 46	Total
47 - 76	Blank
77 - 80	ID#

Royal Marines  
ID# 4224  
1900-15, 1920-40, 1948-75

Cases	col.	Year
65	1 - 4	Commissioned Officers
	5 - 10	Warrant Officers
	11 - 16	General Officers
	17 - 22	Senior Officers
	23 - 28	Junior Officers
	29 - 34	Staff Sergeants and Sergeants
	35 - 40	Musical Ranks
	41 - 46	Rank and File
	47 - 52	Band Boys
	53 - 58	Other Ranks
	59 - 64	Total
	65 - 70	Blank
	71 - 76	ID#
	77 - 80	

Royal Air Force  
ID# 3225  
1919-40, 1947-75

Cases	col.	Year
51	1 - 4	Air Officers
	5 - 10	Senior Officers
	11 - 16	Junior Officers
	17 - 22	Commissioned Officers
	23 - 28	Cadets or Officer Designates
	29 - 34	Total Officers
	35 - 40	Warrant Officers and Warrant Officers and Non-commissioned officers
	41 - 46	Non-Commissioned Officers
	47 - 52	Men
	53 - 58	Boys
	59 - 64	All Other Ranks
	65 - 70	Total
	71 - 76	ID#
	77 - 80	

## Women by Rank and Branch

Cases	ID#	1941-1974
34	109	

col.

1 - 4	Year
5 - 9	Army Officers
10 - 14	Army EM's
15 - 19	Navy Officers
20 - 24	Navy EM's
25 - 29	Marine Corps Officers
30 - 34	Marine Corps EM's
35 - 39	Air Force Officers
40 - 44	Air Force EM's
45 - 77	Blank
78 - 80	ID#

United States

US110

Army EM's

Cases	ID#	1901-1974
74	110	

col.

1 - 4	Year
5 - 11	E9
12 - 18	E8
19 - 25	E7
26 - 32	E6
33 - 39	E5
40 - 46	E4
47 - 53	E3
54 - 60	E2
61 - 67	E1
68 - 77	Blank
78 - 80	ID#



United States

US113

Armed Forces Personnel Total-Army, Air Force

Cases	ID#	1900-1974
75	113	

col.

1 - 4	Year
5 - 12	Grand Total
13 - 20	Army Total
21 - 28	Army Officers
29 - 36	Army Enlisted
37 - 44	Air Force Total
45 - 52	Air Force Officers
53 - 60	Air Force Enlisted
61 - 77	Blank
78 - 80	ID#

United States

US111

Army Officers

Cases	ID#	1900-1974
75	111	

col.

1 - 4	Year
5 - 10	General
11 - 16	Lt. General
17 - 22	Major General
23 - 28	Brig. General
29 - 34	Colonel
35 - 40	Lt. Colonel
41 - 46	Major
47 - 52	Captain
53 - 58	1 Lt.
59 - 64	2 Lt.
65 - 70	Warrant Officer
71 - 77	Blank
78 - 80	ID#

United States

US114

Armed Forces Personnel Total-Navy, Marine Corps

Cases	ID#	1900-1974
75	114	

col.

1 - 4	Year
5 - 12	Navy Total
13 - 20	Navy Officers
21 - 28	Navy Enlisted
29 - 36	Marine Total
37 - 44	Marine Officers
45 - 52	Marine Enlisted
53 - 77	Blank
78 - 80	ID#

United States

US115

Population (000's)

Cases  
75

ID#  
115

1900-1974

col.

1 - 4	Year
5 - 10	Total
11 - 16	Males
17 - 22	Females
23 - 28	White
29 - 34	Nonwhite
35 - 39	Under 14
40 - 44	14 - 24
45 - 49	25 - 34
50 - 54	35 - 44
55 - 59	45 - 54
60 - 64	55 - 64
65 - 69	Over 65
70 - 77	Blank
78 - 80	ID#



United States

US155

Defense Expenditures

Cases	ID#	1900-1972
73	155	

col.

1 - 4	Year
5 - 9	Major National Security Expenditure (millions-total)
10 - 11	% Army
12 - 13	% Navy
14 - 15	% Air Force
16 - 17	% of Budget spent on Major National Security
18 - 77	Blank
78 - 80	ID#

United States

US154

Civilian Employees

Cases	ID#	1901, 1908-1971
72	154	

col.

1 - 4	Year
5 - 8	Army
9 - 12	Navy
13 - 16	Air Force
17 - 20	Total
21 - 77	Blank
78 - 80	ID#

United States

US153

Officers Total and Females

Cases	ID#	1940-1946, 1950, 1953, 1960, 1963-1969
17	153	

col.

1 - 4	Year
5 - 11	Army Total
12 - 15	Army Female
16 - 22	Navy Total
23 - 26	Navy Female
27 - 33	Marine Corps Total
34 - 37	Marine Corps Female
38 - 44	Air Force Total
45 - 48	Air Force Female
49 - 77	Blank
78 - 80	ID#

United States

US152

Veterans Affairs as % of Federal Budget

Cases	ID#	1900-1971
72	152	

col.

1 - 4	Year
5 - 8	% of Federal Budget for Veterans Affairs
9 - 77	Blank
78 - 80	ID#



## Defense Budget

Cases	ID#	
31	151	1930-31, 1940-52, 1955, 1958-1972

col.

1 - 4	Year
5 - 8	% of Federal Budget to National Defense
9 - 12	% of Defense Budget to Army
13 - 16	% of Defense Budget to Navy
17 - 20	% of Defense Budget to Air Force
21 - 24	% of GNP to National Defense
25 - 77	Blank
78 - 80	ID#

United States

US140

Marine Corps EM

Cases	ID#	1945-1974
30	140	

col.

1 - 4	Year
5 - 11	E9
12 - 18	E8
19 - 25	E7
26 - 32	E6
33 - 39	E5
40 - 46	E4
47 - 53	E3
54 - 60	E2
61 - 67	E1
68 - 77	Blank
78 - 80	ID#

United States

US141

Marine Corps Officers

Cases	ID#	1900-1974
75	141	

col.

1 - 4	Year
5 - 10	General
11 - 16	Lt. General
17 - 22	Major General
23 - 28	Brigadier General
29 - 34	Colonel
35 - 40	Lt. Colonel
41 - 46	Major
47 - 52	Captain
53 - 48	1 Lieutenant
59 - 64	2 Lieutenant
65 - 70	Warrant Officers
71 - 77	Blank
78 - 80	ID#

United States

US130

Air Force EM

Cases	ID#	1949-1974
25	130	

col.

1 - 4	Year
5 - 11	E9
12 - 18	E8
19 - 25	E7
26 - 32	E6
33 - 39	E5
40 - 46	E4
47 - 53	E3
54 - 60	E2
61 - 67	E1
68 - 77	Blank
78 - 80	ID#



United States

US131

Air Force Officers

Cases	ID#	1949-1974
25	131	

col.

1 - 4	Year
5 - 10	General
11 - 16	Lt. General
17 - 22	Major General
23 - 28	Brigadier General
29 - 34	Colonel
35 - 40	Lt. Colonel
41 - 46	Major
47 - 52	Captain
53 - 58	1 Lieutenant
59 - 64	2 Lieutenant
65 - 70	Warrant Officer
71 - 77	Blank
78 - 80	ID#

United States

US120

Navy EM

Cases	ID#	1922-1974
42	120	

col.

1 - 4	Year
5 - 11	E9
12 - 18	E8
19 - 25	E7
26 - 32	E6
33 - 39	E5
40 - 46	E4
47 - 53	E3
54 - 60	E2
61 - 67	E1
68 - 77	Blank
78 - 80	ID#

United States

US121

Navy Officers

Cases	ID#	1900-1974
75	121	

col.

1 - 4	Year
5 - 10	Admiral
11 - 16	Vice-Admiral
17 - 22	Upper Rear Admiral
23 - 28	Lower Rear Admiral
29 - 34	Captain
25 - 40	Commander
41 - 46	Lt. Commander
47 - 52	Lieutenant
53 - 48	Lt.-Jg.
59 - 64	Ensign
65 - 70	W.O.
71 - 77	Blank
78 - 80	ID#

United States

US117

Labor Statistics

Cases	ID#	1900-1974
75	117	

col.

1 - 4	Year
5 - 9	Total Labor Force
10 - 14	Civilian Labor Force
15 - 19	Unemployed
20 - 24	Armed Forces Officer Average Income
25 - 29	Public School Teacher Average Income
30 - 34	College Teacher Average Income
35 - 39	Private Industry Employee Average Income
40 - 44	Government Employee Average Income
45 - 77	Blank
78 - 80	ID#



## National Accounts

Cases	ID#	1902-1957
43	116	

col.

1 - 4	Year
5 - 9	GNP (current billions)
10 - 13	GNP per capita (current dollars)
14 - 18	GNP (1929 billions)
19 - 22	GNP per capita (1929 dollars)
23 - 25	Implicit Price Index (1929 = 100)
26 - 30	Gross Domestic Product (1929 billions)
31 - 35	Gross Private Product (total)
36 - 39	Gross Private Product (farm)
40 - 44	Gross Private Product (nonfarm)
55 - 48	Government Product
49 - 77	Blank
78 - 80	ID#

## Army Breakdown by Grade

Cases	ID#	
12	301	1962-1973
col.		
1 - 4	Year	
5 - 6	OF-9/OF-8	
7 - 8	OF-7	
9 - 10	OF-6	
11 - 13	OF-5	
14 - 17	OF-4	
18 - 21	OF-3	
22 - 25	OF-2	
26 - 29	OF-1	
30	Branch of service (Army=1)	
31 - 77	Blank	
78 - 80	ID#	

## Air Force Breakdown by Grade

Cases

ID#

12

302

1962-1973

col.

1 - 4	Year
5 - 6	OF-9/OF-8
7 - 8	OF-7
9 - 10	OF-6
11 - 13	OF-5
14 - 17	OF-4
18 - 21	OF-3
22 - 25	OF-2
26 - 29	OF-1
30	Branch of service (Air Force=3)
31 - 77	Blank
78 - 80	ID#

West Germany

GER303

Navy Breakdown by Grade

Cases

ID#

12

303

1962-1973

col.

1 - 4	Year
5 - 6	OF-9/OF-8
7 - 8	OF-7
9 - 10	OF-6
11 - 13	OF-5
14 - 17	OF-4
18 - 21	OF-3
22 - 25	OF-2
26 - 29	OF-1
30	Branch of service (Navy=2)
31 - 77	Blank
78 - 80	ID#



## Breakdown of Manpower Levels by Service

Cases	ID#	
12	304	1962-1973
col.		
1 - 4	Year	
5 - 9	Career Personnel Total	
10 - 14	Army	
15 - 19	Air Force	
20 - 23	Navy	
24 - 29	Long-Term Personnel Total	
30 - 35	Long-Term Personnel Army	
36 - 40	Long-Term Personnel Air Force	
41 - 45	Long-Term Personnel Navy	
46 - 51	Conscripts Total	
52 - 57	Conscripts Army	
58 - 62	Conscripts Air Force	
63 - 67	Conscripts Navy	
68 - 77	Blank	
78 - 80	ID#	

## Officers by Grade and Service leaving Forces

Cases	ID#	
14	305	1960-1973

col.

1 - 4	Year
5	GEN/LTG Army
6 - 7	MGN Army
8 - 9	BGN Army
10 - 12	COL Army
13-15	LTC Army
16 - 18	MAJ Army
19 - 21	CPT Army
22 - 24	1 LT Army
25 - 28	2 LT Army
29	GEN/LTG Air Force
30	MGN Air Force
31	BGN Air Force
32 - 33	COL Air Force
34 - 36	LTC Air Force
37 - 38	MAJ Air Force
39 - 41	CPT Air Force
42 - 43	1 LT Air Force
44 - 46	2 LT Air Force
47	OF-9 Navy
48	OF-8 Navy
49	OF-7 Navy
50 -51	OF-6 Navy
52 - 53	OF-5 Navy
54 - 55	OF-4 Navy
56 - 58	OF-3 Navy
59 - 60	OF-2 Navy
61 - 63	OF-1 Navy
64 - 77	Blank
78 - 80	ID#

West Germany

GE2306

Cases	ID#	Army Number of Enlisted Conscripts Leaving by Year (Dec. of year)
14	2306	1960-1973

col.

1 - 4	Year
5	Branch of Service    Army=1 Navy=2 Air Force=3
6 - 9	NCO's
10 - 15	Men
16 - 76	Blank
77 - 80	ID#

West Germany

GE3306

Breakdown of Reserve Forces by Service

Cases	ID#	
13	3306	1961-1973

col.

1 - 4	Year
5 - 11	Army
12 - 17	Air Force
18 - 22	Navy
23 - 29	Total
30 - 76	Blank
77 - 80	ID#



West Germany

GE2307

Air Force Number of Enlisted Conscripts Leaving  
by Year (Dec. of year)

Cases	ID#
14	2307

1960-1973

col.

1 - 4

Year

5

Branch of Service Army = 1

Navy = 2

Air Force = 3

6 - 9

NCO's

10 - 15

Men

16 - 76

Blank

77 - 80

ID#

West Germany

GE2308

Navy Number of Enlisted Conscripts Leaving by  
Year (Dec. of year)

Cases	ID#	
14	2308	1960-1973
col.		
1 - 4	Year	
5	Branch of Service	Army = 1 Navy = 2 Air Force = 3
6 - 9	NCO's	
10 - 15	Men	
16 - 76	Blank	
77 - 80	ID#	

## Overall Manpower Levels

Cases	ID#	
18	2309	1956-1973
col.		
1 - 4	Year	
5 - 25	Blank	
26 - 31	Military Personnel	
32 - 37	Total Civilian Personnel	
38 - 43	Male Civilian Personnel	
44 - 48	Female Civilian Personnel	
49 - 76	Blank	
77 - 80	ID#	

## Civilian Employee Breakdown

Cases	ID#	
5	2310	1962, 1965, 1966, 1969, 1970, 1973

col.

1 - 4	Year
5 - 40	Blank
41 - 44	Ministry of Defense
45 - 49	Army
50 - 54	Air Force
55 - 58	Navy
59 - 62	Central Military Agencies
63 - 76	Blank
77 - 80	ID#



## Enlistments, Transfers, Re-enlistments

Cases	ID#	
10	313	1964-1973

col.

1 - 4	Year
5 - 9	Enlistments (21 months-2 years)
10 - 14	Enlistments (3 or more years)
15 - 19	Transfers (21 months-2 years) conscripts to long-term
20 - 23	Transfers (3-15 years) conscripts to long-term
24 - 27	Re-enlistments Officers Extension of Enlistment 3-15 years
28 - 32	Re-enlistments NCO's Extension of Enlistment 3-15 years
33 - 36	Re-enlistments Men Extension of Enlistment 3-15 years
37 - 77	Blank
78 - 80	ID#

West Germany

GE1306

Army Number of Enlisted Leaving Force by Grade

Cases	ID#
14	1306

1960-1973

col.

1 - 4	Year
5 - 7	OR-9
8 - 9	OR-8
10 - 12	OR-7
13 - 16	OR-6
17 - 20	OR-5
21 - 24	OR-4
25 - 28	OR-3
29 - 32	OR-2
33 - 37	OR-1
38 - 76	Blank
77 - 80	ID#

## Air Force Number of Enlisted Leaving Force by Grade

Cases	ID#
14	1307

1960-1973

col.

1 - 4	Year
5 - 7	OR-9
8 - 9	OR-8
10 - 12	OR-7
13 - 16	OR-6
17 - 20	OR-5
21 - 24	OR-4
25 - 28	OR-3
29 - 32	OR-2
33 - 37	OR-1
38 - 76	Blank
77 - 80	ID#

West Germany

GE1308

Navy Number of Enlisted Leaving Force by Grade

Cases	ID#	
14	1308	1960-1973

col.

1 - 4	Year
5 - 7	OR-9
8 - 9	OR-8
12 - 12	OR-7
13 - 16	OR-6
17 - 20	OR-5
21 - 24	OR-4
25 - 28	OR-3
29 - 32	OR-2
33 - 37	OR-1
38 - 76	Blank
77 - 80	ID#



## Officers, Enlisted, and Military Expenditure Status

Cases	ID#	
19	1309	1956-1974
col.		
1 - 4	Year	
5 - 8	Officers: Recruitment of Applicants with Previous Military service outside Bundeswehr and applicants holding officer's rank by sections 22, 29, 29, 43 of Military Career Ordinance (SLV)	
9 - 12	Officer Candidates: Recruitment of candidates with no previous military service and admission from active military service (ex-conscripts and ex-NCO's) excluding those covered by Section 33 of SLV (3 or more years)	
13 - 15	Number of above from active military service	
16 - 20	Enlisted men: volunteer recruits for NCO and men careers excluding conscripts who became long-term (2 or more years)	
21 - 25	Number of 2 year enlistees in above	
26 - 48	Blank	
49 - 51	Proportion (%) of GNP at Factor Cost spent on Defense Excluding aid to Berlin	
52 - 54	Including aid to Berlin	
55 - 58	Proportion (%) of National Budget spent on Defense Excluding aid to Berlin	
59 - 62	Including aid to Berlin	
63 - 76	Blank	
77 - 80	ID#	

## Army Enlisted Rank Structure

Cases	ID#	
4	1310	1962, 1965, 1970, 1973

col.

1 - 4	Year	
5 - 8	OR-9	
9 - 13	OR-8	
14 - 18	OR-7	
19 - 23	OR-6	
24 - 28	OR-5	
29 - 33	OR-4	
34 - 39	OR-3/OR-1	
40	Branch of Service	Army = 1 Navy = 2 Air Force = 3
41 - 76	Blank	
77 - 80	ID#	

West Germany

GE1311

Air Force Enlisted Rank Structure

Cases	ID#	
4	1311	1962, 1965, 1970, 1973

col.

1 - 4	Year	
5 - 8	OR-9	
9 - 13	OR-8	
14 - 18	OR-7	
19 - 23	OR-6	
24 - 28	OR-5	
29 - 33	OR-4	
34 - 39	OR-3/OR-1	
40	Branch of Service	Army = 1 Navy = 2 Air Force = 3
41 - 76	Blank	
77 - 80	ID#	

## Navy Enlisted Rank Structure

Cases	ID#	
4	1312	1962, 1965, 1970, 1973
col.		
1 - 4	Year	
5 - 8	OR-9	
9 - 13	OR-8	
14 - 18	OR-7	
19 - 23	OR-6	
24 - 28	OR-5	
29 - 33	OR-4	
34 - 39	OR-3/OR-1	
40	Branch of Service	Army = 1 Navy = 2 Air Force = 3
41 - 76	Blank	
77 - 80	ID#	

End  
1-79